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ORIGINAL ARTICLES.

ANNUAL ADDRESS OF THE PRESIDENT.*

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In pursuance of a time-honored custom, I submit to you at the close of the year a brief review of the work of your Society.

The four regular quarterly meetings were well attended, and important business was transacted at each of them. The number of scientific meetings was twenty-one. The average attendance upon these meetings was forty-four; the maximum attendance was sixty-eight. The number of new members elected during the year was thirty-seven; the number of the newly-elected members who qualified during the year was twenty-four. The discrepancy in these figures is due to the fact that most of those who have not qualified were elected at the last regular business meeting.

The number of papers and other scientific communications made during the year was fifty-nine. A critical review of these communications reveals the fact that none of them was without practical and scientific interest and that the greater number are of high scientific value. It may be truly said that no meeting has been without important and instructive papers, and suggestive and valuable discussions. No member of this Society who has regularly attended its sessions fails to realize that his evenings have been profitably spent. The Society has kept itself in touch with the advance in medical knowledge; the latest results of the advancing labors of the profession have been presented to you in this hall and discussed in a spirit of broad and liberal criticism. In addition to the work done by the members of the Society, scientific men not members, distinguished for their achievements in fields touching upon medicine, have deemed themselves honored by the invitation to lay the result of their investigations before you, and have contributed greatly to the success of our meetings. As an evidence of the increasing interest of the members of the Society in scientific work, I may repeat the statement of the chairman of the board of directors that whereas two years ago there was some difficulty in securing a sufficient number of communications for some of the meetings, at the present time there is difficulty in

*Before the Philadelphia County Medical Society, January 27, 1897.

securing opportunity for the papers that are offered.

The Society continues to make its power and influence felt in the meetings of the State and National Societies by the character of its delegates and their intelligent action upon questions relating to the welfare of the medical profession and the extension of its usefulness.

Among the important special committees appointed during the year was that charged with the duty of urging the American Medical Association to meet in Philadelphia in the current year—its fiftieth anniversary—a most important matter, since Philadelphia was the birthplace of the American Medical Association and Dr. Nathaniel Chapman, of Philadelphia, its first president. It is a matter of congratulation to the members of this Society that the work of that committee was attended with an immediate general response on the part of the members of the American Medical Association, and that the meeting of that body will be held here early in June next.

A year ago it was my painful duty to allude to the fact that the Society was largely in debt and at that time had to face the necessity of abandoning the publication of the *Transactions* for the succeeding year. It is a gratification to state now that the treasurer reports to me that the Society has paid off during the year more than thirteen hundred dollars of old indebtedness and now carries no debt except that to the State Society for the year 1896—an obligation that there is every expectation of meeting at an early date from the current resources of the Society; and to add that an arrangement was entered into with the editor of the MEDICAL AND SURGICAL REPORTER, through which the proceedings of the meetings of the Society have been published from week to week in the columns of that journal, while at the end of the year the Society will receive 750 reprints of 251 pages at an outlay of $163.15. Simply bound, with a proper index, etc., these sheets will make a creditable volume, representing essentially the scientific activity of the Society for the year. The editor of the *Transactions* adds a word in praise of the spirit in which the editor of the MEDICAL AND SURGICAL REPORTER undertook and has carried out his part in the publication of the proceedings of the Society, and further congratulates the Society on preserving the continuity of its annual volume of *Transactions*.

In congratulating the Society upon the successful outcome of the devoted labors of its directors and publication committee I desire to express my warm thanks, in which I am sure every member of the Society will concur, to the gentlemen comprising these active, energetic and faithful representative bodies of our membership.

A year ago I called the attention of the Society to the fact that the date of the last edition of the constitution and by-laws is 1887, and pointed out that a new edition, embodying the changes to date, is greatly needed. The matter of the revision of the by-laws has been for some time in the hands of a committee that has not yet reported. I trust that ere another year has passed the members of this committee will have completed their work.

Some time ago the subject of changing the hour of meeting from 8 o'clock to 8.30 P. M. was agitated. In my former address I expressed the opinion that such a change should not be made without further careful consideration. The greater number of the meetings are largely attended, and the majority of the members, as a rule, enter the hall within a few minutes of the hour named for the opening of the Society. Notwithstanding this, many of our meetings have been late in adjournment, often far past 10 o'clock. It seems to me, therefore, that 8 o'clock—an hour long established by custom—should be retained. In this connection I again venture to suggest some further conciseness in the presentation of papers and in the discussions.

During the year eight members of the Society have resigned. Several of these resignations have been necessitated by a change of residence, and in particular has this been the case in two or three of the more active and interested of the number.

It is my painful duty to speak of those whose names are, for another cause, no longer upon the roll of active membership. They have gone before us. New members join as the old depart, but the

strength and power and usefulness of the Society continue. "Let us work while it is yet day, for the night cometh wherein no man shall work."

We recall with sorrow the death during the year 1896 of Arthur J. Hamilton, A. S. Roberts, James Graham, William H. Pancoast.

In retiring from the office of President, I desire to express to you my high appreciation of the honor which you have conferred upon me and to thank you for it. I shall cherish the memory of the hours spent in this Chair as among the most satisfactory and pleasant in my professional life. They have brought me into closer touch with the members of my beloved profession—with you. They have enabled me to know you, old friends, in a new and closer way. They have brought home to me the energy, studiousness, devotedness of the members of our guild—its high sense of duty, its lofty citizenship. I thank you again for permitting me, during these two pleasant years, to thus enter into nearer personal relationship with you. I thank you for your constant courtesy and your generous forbearance with my shortcomings as a presiding officer.

I congratulate you that you have chosen as your next President a member so distinguished as teacher, author, practitioner; but above all as a sincere, earnest, true man.

THE "SCHOTT METHOD" OF GYMNASTICS IN THE TREATMENT OF CHRONIC DISEASE OF THE HEART, WITH REPORT OF A CASE, AND DEMONSTRATION OF THE EXERCISES.*

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Assisted by

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The treatment to which I desire to call the attention of the Society is a portion of the so-called Nauheim treatment of cardiac disease, which was inaugurated some twenty years ago by Drs. August and Theodor Schott, and has recently found its way into English literature. Dr. August Schott, now deceased, published his first paper in the *Berliner klinische Wochenschrift*, in 1880. Dr. Theodor Schott published his first paper in the same journal in 1883. Since that time both the brothers Schott have published several monographs and journal articles on various phases of the subject, and in 1891, at the instance of Dr. W. Bezley Thorne, Dr. Theodor Schott communicated to the *Lancet* a brief account of his methods. Dr. Thorne published a monograph on the subject in 1895, and for the last two years, probably because of the great success that Dr. Thorne has been having in London, in the treatment of chronic diseases of the heart by the Nauheim methods, the *British Medical Journal* has been pretty well filled with papers upon this theme. Several eminent British physicians, among them Sir William Broadbent and Sir T. Grainger Stewart, have visited Bad Nauheim and recorded their observations, all very much in favor of the method and confirming the scientific character of the observations of the brothers Schott. In fact, a very noticeable feature of these reports is the praise accorded to the Drs. Schott for their moderation in statement and their carefulness in observation; particularly when we consider the really wonderful nature of the recoveries that they report. The description here given of the exercises and their effects are cited from or largely based upon the writings of the British observers mentioned.

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The treatment carried out at Nauheim is directed toward the relief of the damaged heart, in cases of dilatation or of ruptured compensation associated with valvular lesions, by action upon the peripheral vessels and blood-spaces; partly through the effect of thermal, saline and carbonated baths, and partly by a special system of gentle muscular exercises, which, with the assistance of Dr. West, I shall partially demonstrate this evening. The baths are an important but not an essential portion of the treatment—that is to say, the exercises will do a great deal alone, as we have experienced in four cases. In some instances the baths alone are said to have been successful. At Nauheim, the baths are given in gradually increasing strength in the natural waters, which are of various temperatures and carbonated, containing likewise a number of alkaline and iron salts. Dr. Schott and Dr. Thorne both say, however, that the essentials of the baths can be artificially reproduced by the use of heat and the appropriate reagents, and give formulas for the purpose, chiefly calling for the use of sodium and calcium chlorids, and finally the addition of free carbon dioxid; the latter being released from reservoirs, or evolved in the bath by the use of sodium bicarbonate and hydrochloric acid. I hope soon to have facilities for observation with these artificial baths, but up to this time I have nothing special to report concerning them, and therefore shall confine my remarks this evening to the exercises.

I was under the impression—until I hunted up the literature — that my lecture and demonstration at the Philadelphia Hospital in November last, late as it was, had been the first American contribution to the subject, but I find that Dr. Robert H. Babcock, of Chicago, published a communication in the *Journal of the American Medical Association* for 1893, Dr. Babcock himself having been a patient of Dr. Schott's, and reporting his own case and some other cases on his return to America. One feels somewhat chagrined at his own tardiness when he reads this communication and the others referred to.

The method of exercise is called by Dr. Schott *Widerstandsgymnastik*—resistance-gymnastics. Perhaps the best way to English this term would be to call it *resistance-exercises*, but this alone would not convey the idea. "Swedish movements" are resistance-exercises, too; but this system is differently carried out. "Gently-resisted movements" would perhaps convey the idea better. The patient makes very slight efforts with various muscles, and these are resisted very gently by the operator. As the treatment progresses the resistance is increased, calling upon the patient to put forth greater exertion. There is a course of exercises laid down by Dr. Schott, the whole occupying from thirty minutes to one hour, but the number and degree of movements are varied according to the patient's requirements. With my patients only twenty minutes' exercise has thus far been attempted.

Dr. Schott says that his system consists of slow movements made by the patient and resisted by the operator, short intervals being allowed for rest. The exertion should be small and the patient should be loosely clothed and told to breathe quietly. This matter of quiet breathing is quite important. It must be watched and controlled by the operator. The resistance should not be of such a kind as to prevent the patient feeling master of the situation. The operator must not grasp or in any wise constrict the limb, but oppose by the hand held flatly. The following rules are laid down:

1. Each movement is to be performed slowly and evenly, that is, at a uniform rate.

2. No movement is to be repeated twice in succession in the same limb or group of muscles.

3. Each single or combined movement is to be followed by an interval of rest.

4. The movements are not allowed to accelerate the patient's breathing, and the operator must watch the face for the slightest indications of (*a*) dilatation of the alæ nasi; (*b*) drawing of the corners of the mouth; (*c*) duskiness or pallor of the cheeks and lips; (*d*) yawning, (*e*) sweating; and (*f*) palpitation.

5. The appearance of any of the foregoing signs should be the signal for immediately interrupting the movements in process of execution, and for either

supporting the limb which is being moved; or allowing it to subside into a state of rest.

6. The patient must be directed to breathe regularly and uninterruptedly, and should he find any difficulty in doing so, or for some reason show a tendency to hold his breath, he must be instructed to continue counting in a whisper during the progress of each movement.

7. No limb or portion of the body of the patient is to be so constricted as to check the flow of blood.

The physiologic effect and therapeutic object of these procedures are to accelerate the flow of blood through the vessels, and diminish the work thrown upon the heart, allowing its chambers to contract more readily—hence the importance of attending strictly to the details mentioned.

The exercises consist in motions with the limbs, hands, feet and trunk, made against slight resistance. They are so devised as to call into operation, according to a definite order and succession, nearly every voluntary muscle and system of muscles in the body. While this order has been carefully worked out by the brothers Schott as the result of long experience, the physician is to use his judgment as to which exercises are to be used and which omitted in any particular case. The system advised begins with the upper extremities, goes to the trunk, then to the lower extremities and concludes with a return to the upper extremities. The motions include extension, flexion and rotation or circumduction. As already stated, the movements are carried out in a certain definite system, uniformly, with intervals of rest after each movement, and with gentle resistance upon the part of the operator, who carefully watches the effect, so that the patient shall not be exhausted. The operator especially regulates the patient's breathing (which is not allowed to become accelerated) and watches the color of the face; hurried breathing, even distention of the nostrils, flushing, pallor, or sweating being a signal for interruption or cessation. In suspending the treatment, the operator's judgment decides whether to support the part being exercised in the position it has assumed, or to allow it to return gently to a position of normal rest. So, too, while it is best for the patient to stand, he may sit or lie when too feeble to begin treatment, otherwise.

The following is the list of exercises:

1. Arms extended in front of body on a level with shoulder, hands meeting; arms carried out until in line and brought back to original position.

2. Arms hanging at sides, palms forward; arm flexed at elbow until tips of fingers touch shoulder, back to original position; one arm only moved at a time.

3. Arms down, palms forward, arms carried outwards and upwards until thumbs meet overhead; back to original position.

4. Hands in front of abdomen, fingers flexed so that second phalanges touch those of opposite hand; arms raised until hands rest on top of head; back to original position.

5. Arms down, palms against thighs, arms raised in parallel planes as high as possible; back to original position.

6. Trunk flexed on hips; return to original position.

7. Trunk rotated to left—to right; return to original position.

8. Trunk flexed laterally.

9. As No. 1, but fists clinched.

10. As No. 2, but fists clinched.

11. Arms down, palms against thighs, each in turn raised forward and upward until arm is alongside of ear, then turned outward; arm descends backward.

12. Arms down, palms to thighs, both together moved backward in parallel planes as far as possible without bending the trunk forward.

13. Thighs in turn flexed on trunk, opposite hand resting on chair.

14. Lower extremities in turn extended fully, and bent on trunk forward and backward to extreme limits of movements, opposite hand resting on chair.

15. Legs in turn flexed on thighs, both hands on chair.

16. Feet together, lower extremities in turn abducted so far as possible and brought back to original position, opposite hand on chair.

17. The arms, extended horizontally outward, are rotated from the shoulder joint to the extreme limits forward and backward.

18. The hands in turn are extended and flexed on the forearm to extreme

limits and brought back in line with arm.

19. The feet in turn are flexed and extended to extreme limits and then brought back to their natural position.

The duration of the exercises is from twenty minutes to an hour and a half, an hour being the average at Nauheim, even in the beginning. The following are the results stated to be obtained by the baths and exercises at Nauheim:

(1) Diminution in the frequency of the pulse, with increase in its force and fulness; (2) Contraction of the heart, as shown by diminution in the area of cardiac dulness and recession of the apex-beat upward and toward the median line. (3) Slower and deeper breathing, with a senseness of lightness and relief in the chest; (4) A better color of the lips, and improved facial aspect; and, (5) When that organ has been congested, a marked diminution in the size of the liver. Furthermore, after a few days of systematic administration of the exercises, there is usually observed marked, and often long-maintained, diuresis. Pathologic effusions are often completely removed.

Dr. W. Bezley Thorne says: "The results, in fact, are such as would scarcely be believed by any one but an eye-witness. It is by no means uncommon in cases of dilatation to see within one hour the oblique long diameter of the heart's area of dulness diminish by from three-quarters of an inch to an inch and a quarter, and, perhaps, more surprising still, to observe a diminution of as many as two inches, in vertical measurement, of a liver which at first extended to the umbilical level; and to hear the patient, at the conclusion of what cannot be described as an ordeal, volunteer the statement that a load has been removed from the precordia, that he breathes easier and more deeply, and experiences a sense of general relief. Such gains are not permanent, and in the time that intervenes before the next day's exercises or baths, as the case may be, the dilated and congested organs tend to resume their former size, but do not wholly relapse. A slight proportion of the gain is held . . . . . until, as the result of treatment, perhaps at the end of a few weeks, the dilated heart and the congested liver have recovered their normal dimensions, or at any rate such contraction and compensatory power in the one case, and resolution in the other, as to make them practically sound."

Sir. T. Grainger Stewart concludes, as the result of personal observation with the Nauheim treatment:

"1. That in a large proportion of cases it effects immediate improvement in the condition of the heart, as shown by percussion and auscultation; the sounds becoming more distinct and the area of dulness diminishing to a greater or less extent.

"2. That in many cases the rhythm of the pulse improves, and the beat becomes more vigorous.

"3. That while the immediate effect is in so far temporary, the heart rarely goes back to its previous condition of dilatation, but remains somewhat smaller than it had been before the exercises, and that gradually improvement of a lasting kind sets in, so that the heart recovers its tone and the area of dulness permanently diminishes."

As to the effect in cases of valvular lesions, it is stated that in the course of the first few movements a bruit due to stenosis is observed to be accentuated, but afterwards diminishes, as the peripheral resistance lessens. In our case the accentuation of the bruit has remained, the sound at first having been but faintly heard, owing to the weakness of the cardiac muscle, and its greater audibility now being interpreted as a sign of increased muscular vigor. Indeed it is urged as a diagnostic merit of the method that valvular lesions previously unsuspected may become recognizable by the development of murmurs during treatment. Murmurs due to insufficiency, other than that caused by actual lesion of the valves, are diminished in intensity, modified as to duplication and finally obliterated. In cases of early valvular lesions, the murmurs are said to disappear as the final result of treatment. The condition of the cardiac muscle has been so much improved in the very chronic cases that I have had under observation that we may readily believe the statement that in early cases all traces of myocarditis are removed.

The counter-indications against the treatment in the entire range of chronic

cardio-vascular affections are advanced arterio-sclerosis, decided degeneration of the cardiac muscle and aneurism. Some of the conditions earlier deemed counter-indications are now not so considered. Thus, in the patient before you this evening, a quite advanced case of arterio-sclerosis, the exercises have certainly done much good. The only absolute counter-indications that remain generally insisted on are marked atheroma, as with pipe-stem arteries, and advanced cases of aneurism in which clots might be loosened and emboli thrown out into the circulation. One should, however, be cautious until he has had sufficient experience to decide for himself. It might be very rash for me to apply the method in a case Dr. Schott might so treat with benefit.

Dr. Thorne states that he has witnessed improvement amounting to practical or actual cure in cases presenting the physical signs usually regarded as indicative of the following affections; stenosis of either the aortic or the mitral orifice, stenosis of both, insufficiency of either or both, with attendant dilatation; dilatation consequent on myocarditis, on habitual hemorrhage and on constitutional anemia; fatty heart (interstitial); weakened heart; congenital mitral insufficiency; patent foramen ovale; and angina pectoris of apparently both neurotic and organic causation. He adds that "it is reasonable to assume that measures calculated to diminish peripheral resistance, and to promote the nutrition and repair of the cardio-vascular tissues, must be applicable to, at least, the early stages of aneurism of the heart and great vessels."

The physiologic mechanism by which this is accomplished is in brief that the gently-resisted movements, carried out as described and demonstrated, dilate in turn the peripheral vessels in every section of the body, and distend the lymph-spaces, and thus by employing for therapeutic purposes the pumping action of the muscles and relieving the veins, securing increased filling of the arteries and better emptying of the heart. In other words, by increasing the volume of circulation in both arteries and veins, by better filling of the vascular system generally, including lymph-channels and lymph-spaces, and thus affording a much larger peripheral area for the blood, the left heart is better emptied by invitation of the blood out of the capillaries, the arterioles, the larger arteries, the aorta; and back pressure upon the left auricle being relieved, the right heart is relieved through the pulmonary circulation, and thus the veins are still further emptied, the congested liver often markedly diminishing in size. In effect the peripheral pump is substituted for the central pump of the circulation, and the latter, being able to contract upon the lessened quantity of blood, now becomes able to do its work once more, and all this without the use of any drug. When necessary, of course, the exercises and baths may be aided by judicious medication.

I have here some careful notes of the case before us which have been made by Dr. West. It will not be necessary to read them in full. The patient, a widow, fifty-eight years old, came under observation at the Philadelphia Polyclinic on the second of October, 1896; having had influenza, of three weeks' duration, a year before, followed by dry pleurisy. For the past five years she has been subject to attacks of dyspepsia and nervousness. A good deal of mental disturbance had recently made her more nervous. In addition to the dyspeptic symptoms, she sought relief for dyspnea, constant, and increased on exertion, headache, vertigo and continuous palpitation of the heart, which gave rise to a sound heard in the left ear. There is also at times a sensation of "stoppage" of the heart—what my friend and colleague, Dr. Riesman, has termed "paulocardia." While in high altitudes (Colorado) she was subject to fainting spells. On examination the heart was found dilated and displaced to the left, the apex-beat being in the sixth interspace one inch to the left of the nipple. Both sounds were feeble, the second being relatively accentuated. There was a faint, harsh systolic murmur, heard best at the aortic cartilage and feebly transmitted into the neck. The pulse was small, feeble, its rate 96, with the patient standing, the artery somewhat hardened. There was occasional intermittence. Small quantities of albumin and granular and hyaline casts were found in the urine. There was no edema.

Under treatment the heart has receded, until the apex, from being one inch to the left of the nipple, is now permanently half an inch to the right of the nipple; and from the sixth interspace it has receded into the fifth. The sounds are stronger, the first markedly so, and the murmur is more distinct, though perhaps softened in quality. Intermittence has ceased. The artery is larger, the beat fuller and slower; the record of to-day being 68 with the patient seated. The sphygmographic tracings which I exhibit, and which were taken respectively before, immediately after and ten minutes after the exercises on a number of occasions, the pressure being but slightly varied, as recorded, and the instrument and the observer being the same in each instance, show the great improvement in the fulness of the arteries and in the character of the beat. For instance, at the beginning of treatment there was scarcely any elevation of the lever and the tracing is markedly that of rigid, unfilled arteries—the tidal wave being wanting. This may be contrasted with the recent tracing in which the pulse is beginning to resemble a normal pulse, the elevation being, however, less than normal, and the tidal wave still obscured; for, of course we have not given the patient new arteries. The patient has lost her unpleasant symptoms, except that there is still a slight noise in the ear. In especial she has lost the extreme depression and dread of suffocation which were the most distressing features of the case.

The albumin has disappeared from the urine and I find that similar cases are also recorded by Dr. Schott and Dr. Thorne. In another Polyclinic case, one of mitral regurgitation and interstitial nephritis the albumin was markedly diminished but did not entirely disappear. However, the patient felt so much better, her edema having gone, and her dyspnea being relieved, that she declared she was well and went back to work. For this reason I have been unable to bring her before you this evening. In conclusion let me say that this is but a preliminary communication to call your attention to the subject; in the effort to atone as much as possible for my long neglect of the method, by doing my share to make its merits more widely known.

From reading and my limited observation, I believe the Nauheim system to be one of the greatest advances in the line of therapeutics without drugs that has yet been made; worthy to rank with Brand's cold-bath treatment of typhoid fever and the pneumatic treatment of pulmonary tuberculosis. It is more troublesome than the writing of prescriptions, but in suitable cases, much more effective.

The two principal events, or discoveries, credited to the dead year are the Roentgen ray and the thermo carbon battery of Dr. Jacques. The first was discovered in 1895. And while a most interesting thing, and possibly having a future, it has come very far from meeting the popular, or even the scientific expectation. It will in all likelihood take its place among certain other scientific facts, and after the glamour and sensationalism have passed away, it will be relegated to the laboratory. It certainly has not achieved much in its most promising field, medicine and surgery. It is almost too early to measure the weight of the discovery of Dr. Jacques. If he eventually accomplishes what he started out to do—that is convert fuel directly into electrical energy, without going by way of steam—he will rank as one of the foremost of scientists, and his achievement will round out the greatness of electricity. There are many who doubt that he has succeeded. It seems, in the humble writer's judgment, to be another case of "something for nothing." The conservation of energy, the indestructibility of matter. Nature's great demand of "an eye for an eye, a tooth for a tooth" have not yet been controverted. Have Dr. Jacques and Edison and all the rest been engaged in a life and death struggle with Nature and her laws? We shall see what we shall see.—*Electrical Journal.*

True Tale of Childhood.—"Mamma," asked a small maiden just before Christmas, "does Santa Claus know my name, where I live, what I want, and where my stocking's hung?" "Yes, dear, I guess he does." "My!" was the reply. "He's almost as cute as God, isn't he?"—*Brooklyn Life.*

A BRIEF REPORT OF THE RESULTS OF A BACTERIOLOGIC INVESTIGATION OF THE NASAL MUCUS IN ONE HUNDRED CASES OF CHRONIC NASAL DISCHARGE, WITH SPECIAL REFERENCE TO THE PRESENCE OF THE KLEBS-LŒFFLER BACILLUS.*

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Although a full report of the following investigations will be published later, it may perhaps be of interest to those present to hear a brief statement of the results obtained. The patients included in the investigation all had one thing in common, namely, a chronic nasal catarrh; none of them was subject to any acute febrile affection, but all were simply the walking cases that I see daily in my office and at my service in the Polyclinic and Howard Hospitals. Great care was exercised in their examination to exclude all that showed any of the well-known clinical signs of diphtheria. The bacteriologic examinations were made by Dr. W. J. Gillespie, and, in the more important cases, were afterward reviewed by myself. The examination embraced 113 cultures of specimens taken from 100 different patients. Of these patients, twenty-five suffered with chronic atrophic rhinitis; thirty-one, with chronic hypertrophic rhinitis; fourteen, with chronic rhinitis; sixteen, with chronic purulent rhinitis; seven, with nasal syphilis; two, with disease of the accessory sinuses; four, with acute rhinitis; one with fibrinous rhinitis.

The bacteriologic examination shows the presence of diphtheria-bacilli in no less than thirty of the cultures examined, these cultures representing the discharges found in twenty-six different patients. In four additional cultures (obtained from three patients), organisms closely resembling diphtheria-bacilli were present. In fifty-eight cultures, staphylococci were found. Of these seven were recognized as staphylococcus aureus; five as staphylococcus albus; one as staphylococcus citreus. The great majority of the cultures contained many diverse forms of organisms, such as bacilli, cocci, diplococci, etc. Leptothrix was found in four, bacillus subtilis in six, and yeast-cells in two of the cultures.

Of the twenty-six patients with diphtheria-bacilli in their nasal secretions, eleven were cases of chronic atrophic rhinitis; three were cases of chronic purulent rhinitis; five were cases of chronic rhinitis; three were cases of nasal syphilis; one was a case of acute rhinitis; and three were cases of hypertrophic rhinitis.

For each disease examined, the number of cases with diphtheria-bacilli was as follows:

Eleven of twenty-five cases of atrophic rhinitis; three of sixteen cases of chronic purulent rhinitis; five of fourteen cases of rhinitis; three of seven cases of nasal syphilis; one of four cases of acute rhinitis; three of thirty-one cases of hypertrophic rhinitis; none in two cases of disease of the accessory sinuses; none in the one case of fibrinous rhinitis.

The following clinical histories were obtained in some of the cases in which diphtheria-bacilli were present:

John McM., aged sixteen, a store-boy, consulted me in November, 1896, complaining of nasal obstruction and mucopurulent catarrh, with post-nasal dropping. He stated that the catarrhal symptoms had existed for about six months; but, although his general health had been below the usual standard, at no time had there been fever or symptoms of any acute disease. Upon examination of the nose, it was seen that the cartilaginous septum was deflected to the right, producing stenosis, with marked obstruction; while on the left

* Read before the Philadelphia County Medical Society, January 27, 1897.

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side, the lower turbinal was hypertrophied. Both nasal chambers contained considerable muco-purulent secretion. There was also a chronic granular pharyngitis and some slight enlargement of the tonsils. Cultures were made from the nasal secretion, and the bacteriologic report was that it was almost a pure culture of diphtheria-bacilli. Upon investigation it was found that a younger sister of the patient had had diphtheria four months previously, and, furthermore, that different members of the family (which comprised ten children whose ages ranged from a few months to nineteen years of age) had all suffered more or less from nasal catarrh and sore throat during the summer and autumn. This information led me to decide to make further examinations. Six members of the family were examined and cultures were taken from their nasal chambers, with the following results: One, a school-girl of eight, was found to have chronic purulent rhinitis, with muco-purulent secretion. Bacteriologic examination showed "a few diphtheria-bacilli in involution-forms." Another, a girl aged nine, was found to have chronic purulent rhinitis, with muco-purulent nasal secretion. Bacteriologic examination showed "staphylococci, numerous leptothrix threads, and numerous small bacilli." Another, aged eleven, also a school-girl, was found to have chronic purulent rhinitis, with beginning atrophy and muco-purulent nasal secretion. The bacteriologic report was: "staphylococci and long, slender bacilli." A fourth member of the family, aged six, a school-boy, had purulent rhinitis, with beginning atrophy and muco-purulent nasal secretion; also subacute follicular tonsillitis. The bacteriologic report was: "large heavily-stained bacilli resembling diphtheria-bacilli in form." The mother, aged forty, showed fibrinous rhinitis, with a thick, white membrane clinging to both sides of the septum, with muco-purulent nasal secretion; the mucous membrane of the pharynx was reddened and congested, but free from pseudo-membrane. The bacteriologic report stated; "staphylococci and small irregularly stained bacilli." The mother relates that all of the children had been in good health previous to last July, but that since then they had been continually suffering from a catarrhal condition of the nose and throat. All of the children examined were weakly, listless and anemic, but at no time, during the past six months, had any of them suffered from an acute illness.

Lizzie C., aged thirty-eight, a mill-worker, sought relief for chronic nasal catarrh, complaining of the formation of crusts, with thick muco-purulent nasal secretion, the duration of the symptoms extending back many years. Examination showed an advanced atrophic rhinitis. The lower turbinals had completely disappeared; the middle turbinals were enlarged, congested and polypoid. The pharynx was dry and glazed, and its mucous membrane atrophied, but no membranous deposit could be seen anywhere. The bacteriologic report was: "Typical culture of diphtheria-bacilli." Questioning and investigation failed to reveal the source of infection. The patient had no symptoms of any acute condition, and all the members of the family were well. This patient was kept under treatment for some months. Cultures were taken from the nasal mucus at different intervals, and with the exception of a time when certain local treatment was being applied, the diphtheria-bacilli persisted. Each bacteriologic examination gave the same positive results.

Mr. P., aged thirty-five, a grocer, consulted me six years ago, suffering from constitutional and nasal syphilis. The lower and middle right turbinal bones had been exfoliated. The left nostril was normal. The patient's health at the time was very poor, and he had lost forty pounds in weight. Appropriate treatment, however, soon restored him to his normal weight, his general health improved, and he discontinued his visits, except at long intervals. Last September, he returned, complaining of poor health, with pain in the region of the frontal and ethmoid sinuses, and reported a loss of fifteen pounds in weight. Examination showed the right nasal chamber filled with crusts and muco-purulent secretion. The lower and middle turbinal bones, as before stated, had been exfoliated. The chamber was very large and some uncovered bone could be detected in the region of the

ethmoid cells. Cultures were taken from the nasal chambers, and the bacteriologic report was: "A typical culture of diphtheria-bacilli." Inquiry revealed no source of the diphtheric infection. The patient was placed on active anti-syphilitic treatment and again rapidly regained health. Cultures were made from time to time from the nasal mucus and diphtheria-bacilli repeatedly found.

Many of the other patients with diphtheria-bacilli in their nasal secretions gave somewhat similar histories to those just cited.

REMARKS.

It is not my intention to discuss in this paper the specific virulence or non-virulence of the diphtheria-bacilli found in such a large number of these cases. Some experiments with cultures from several of the patients are about to be made upon animals, and may perhaps throw some light upon this point.

A number of interesting thoughts, however, arise upon contemplating the results already obtained by this investigation, and some of these may be said to be positively demonstrated. Thus, it would seem proven that in a large percentage of cases of chronic nasal catarrh, the secretions are infected with diphtheria-bacilli, staphylococci and other bacteria.

The importance of this fact in surgical procedures upon the nose, throat and adjacent parts, particularly the eye, is evident. Certainly the surgeon should precede such operations by a clinical and bacteriologic examination of the nasal chambers, and when necessary, institute treatment to remove the nasal infection. Such treatment should include very strict disinfection of the nasal chambers, and I would state that in most cases I had no difficulty in quickly effecting this purpose, although for a permanent removal of the germs, treatment must be continued for some time, as in a number of cases, after stopping the local treatment, the diphtheria-bacilli were found to return and were recognized in the cultures. The diphtheria-bacilli were chiefly found in cases of atrophic rhinitis, chronic purulent rhinitis and nasal syphilis—in other words, where a pathologic condition of the nasal chambers, with altered and morbid mucous secretions, continues for a considerable length of time, thus offering a suitable soil for infection, not only by the diphtheria-bacilli, but by many other germs, as ascertained by the bacteriologic investigation. Now, it is well known that in such cases we frequently find several members of the same family affected with the same disease, and although certain inherited and acquired constitutional dyscrasiæ often underlie such conditions, yet we are impressed with the great importance, not only of disinfection, but also of avoidance of infection to others. From this point of view, the common use of a handkerchief among the children of a family, such infected children sleeping with healthy ones or the indiscriminate kissing of children may be mentioned only to be unreservedly condemned.

In all the cases in which the diphtheria-bacilli were present, the patients were observed to be in ill health, being listless, pale and anemic. It was also observed that, after treatment was instituted, not only the local condition, but also the general health greatly improved. It may, therefore, be possible that in such cases there is a slight chronic toxemia caused by the nasal condition. Further, it is quite probable that such diphtheria-infected nasal secretions may account in part for the present wide spread of diphtheria—indeed, several instructive instances have come under my notice. It is to be hoped, therefore, that the proposed investigation upon animals to determine the virulence of the bacilli will aid in forming some positive decision. In conclusion, it gives me great pleasure to acknowledge my indebtedness to Dr. W. J. Gillespie, whose careful and painstaking laboratory work alone enabled me to collect the material for this report.

A Social Error.

Emile Zola's answer to the question, "Should a tax be levied on bicycles?" was short and simple: "I would have bicycles relieved of all tax, and my reason is simply that any impediment placed in the way of the free exercise and development of the wheel is a social error."—*Le Petit Journal.*

A PORTABLE CYLINDER OF ACETYLENE GAS FOR SURGICAL ILLUMINATION.—A SELF-RETAINING DOUBLE-BLADED WIRE VAGINAL SPECULUM.*

ANDREW J. DOWNES, A.M., M.D., PHILADELPHIA.

On numerous occasions a bright light is needed in medicine, both by the specialist and the general practitioner. A good portable illuminant is especially desired. Up to the present time there has been but one such light, the incandescent generated by a storage battery. I need not mention how unsatisfactory this is. It makes too heavy an outfit and is too expensive; when most needed the battery may not work and, besides, the light, with an unyieldy battery and a large film, is too weak. Having some acquaintance with the properties of acetylene gas I inquired of the Acetylene Gas Light Co. if it would not be possible for them to supply a small cylinder capable of furnishing a light for some hours. I was surprised to find that they already had a number of cylinders, sixteen inches long by one and one-half inches in diameter, with a capacity for holding enough liquefied gas to supply a flame of sixty candle power for from eight to ten hours.

They were kind enough to loan me a cylinder, which I used in St. Mary's Hospital for furnishing the light in cystoscopic examination and ureteral catheterization—the first time, I believe, the light was used in medicine. Reflecting from this intense white light, I found I had a much better view of the bladder and succeeded more easily in finding the ureteral orifice than when I had used the electric light.

The strength and intensity of this white light brought out, it seemed to me, with greater distinctness the vessels and other features of the bladder-wall. My object in introducing this light to the attention of the profession is that the Acetylene Light Co. may be induced to supply for the use of physicians a small portable cylinder, the most suitable measurements of which would be eight inches in length and three inches in diameter.

There is but one objection to the use of this light—that is, being an exposed flame, it should not be used in close proximity to ether. The danger of explosion of a cylinder of such small size as that indicated is practically *nil*. Such a cylinder would weigh between two and three pounds. The light, of sixty candle power, is intensely white. With an apparatus so light in weight, so portable and so manageable as this the physician need never be unable to examine thoroughly at private residences any of the accessible cavities of the body.

* * * *

The wire speculum is made up of two blades, the wire forming which constitutes the spring to hold them apart, so that when in use the instrument is out of the way, pressed against the thighs. It is distinctly an operating speculum, and it is too strong for ordinary examinations. It holds itself in place well and keeps the anterior and posterior walls of the vagina quite apart. It affords a good view of the cervix and allows considerable traction on it.

* Exhibited to the Philadelphia County Medical Society, January 27, 1897.

"I don't like to ride my bicycle now," said the fair young girl, "because of the wind."

The young man slightly blushed.

"Co-couldn't you use strips of lead or something?" he stammered.

"Strips of lead for what?"

The young man blushed again. The room seemed painfully hot.

"Why, in the hem of your sk—skirts," he stuttered.

"My skirts?" echoed the tall beauty, "I'm not talking about my skirts. It's my frizzes that the wind blows out."

And the youth went forth into the cool night and butted his head against the first lamp-post.—*Cleveland Plain Dealer.*

CURRENT LITERATURE CONDENSED.

The Management of Infantile Cerebral Palsies.[1]

It is well recognized that in acute-anterior-poliomyelitis the resulting deformities and disability can be greatly lessened by orthopedic treatment. In the disease known as infantile cerebral palsy it is less generally known that similar relief is possible. The disorders are dissimilar in several ways. In poliomyelitis the brain is uninjured, but in cerebral palsy an embolus or thrombus or a cerebral injury is followed by local cyst formation, atrophy, or sclerosis, and often descending degeneration. Lack of muscular control and increased reflexes, resulting in a series of deformities—prominently flexion and adduction—occur, and many of the cases become helpless burdens on their families. The lesion being localized there is a tendency to slow improvement by the less affected portions of the brain developing and partially taking the function of the parts destroyed. What is required, then, is to encourage the child and to systematically train it to help itself and take part in such exercises as are possible for it. Formal mental training is not desirable.

The severer deformities are relieved by thorough division of the tendons of the affected muscles, and it is fortunate that the same tenotomy is followed by a lessening of spasm and by a return of power in the opposing muscle. After operation the limb is put in a position of over-correction for five or six weeks, and after that time supported with braces while muscular and general training is carried out. Except in the worst of these cases the results are surprisingly good.

The Surgery of Intra-Thoracic Tuberculosis.[2]

The writer lays down the usual rules as to asepticity and anatomic precautions for exploratory puncture, and draws attention to the case recorded by Fräntzel, of hemorrhage into the pleural cavity following a negative exploratory puncture, in which the lung was wounded. He utters a warning against the premature evacuation of fluid from the pleural cavity, and states that Bernier, and later Fox, by a comparative study of a large number of cases, found that the mortality was doubled, following the introduction of early thoraco-centesis.

Incision of the thoracic walls is indicated in the following classes of cases: (*a*) When both air and fluid are present in the pleural cavity; (*b*) In cases of ichorous effusion; (*c*) in cases of empyema. The solution of the question as to whether the chest should be opened in cases of empyema in phthisical subjects is often attended by difficulty. The author's experience is that young patients, with so-called "florid" phthisis, stand an operation for empyema badly, while older patients, who have been phthisical for some time and yet have managed to maintain a fair amount of strength, much more frequently do well after the operation. It is advised that, in the great majority of cases of empyema, a rib should be resected at the primary operation.

Extensive Costal Resection.—The writer recommends that the incision as advised by Pearce Gould should be employed, viz., a vertical one over the central portion of the cavity. The cases suitable for this treatment are those of old empyemata with rigid, unyielding walls and fistulous openings. Cavities of from eight to twelve inches in diameter, with short and straight fistulous tracks, are the most favorable for treatment. Even when the cavity is large, provided that the lung still shows some attempts at expansion, that the patient is young and that the cavity does not reach above the third rib, the operation is sometimes useful. At the time of operation the cavity should be irrigated, but further irrigation should be strictly limited to cases in which the pus is decomposed and of bad odor.

In pyo-pneumothorax the same oper-

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[1] Henry Ling Taylor, M.D., *The Medical Progress*, October, 1896.

[2] G. R. Fowler, M.D., Surgeon to the Brooklyn Hospital, in *Annals of Surgery*.

ative measures are indicated as in empyema. The pulmono-pleural opening generally closes within a few days after thoracotomy.

The Direct Treatment of Tubercular Cavities.—Suitable cases for operation are those in which the tubercular mischief in the lung is isolated and is progressing slowly. The presence of adhesions between the parietal and visceral layers of the pleura is favorable. The operation of pneumectomy the writer dismisses as being unjustifiable, though he admits that Lowson, of Hull, and Tuffier, have published successful cases. His remarks on pneumotomy, or simple incision into and drainage of the lung cavity, are as follows: Only a limited area of lung is accessible to the surgeon, the proper field for operation being bounded by the clavicle above, by the manubrium sterni internally, by the pectoralis minor externally, and by the second rib below. The incision is parallel with the first rib, and the pleura in the first intercostal space is freely exposed. The lung tissue is divided with a Paquelin's cautery-knife and the cavity opened, but not explored. The opening should be gradually dilated by plugging with gauze, and the wall of the cavity cauterized on several subsequent occasions.

Pneumotomy.[3]

The writer classifies the case in which pneumotomy may be called for as follows:—1. Interlobar pleurisy. 2. Pulmonary abscess. 3. Pulmonary gangrene. 4. Bronchiectasis. 5. Tubercular cavities. 6. Hydatid cysts. He considers that the indication for pneumotomy is clearest in cases of pulmonary abscess and hydatid cyst. In the case of tubercular cavities, the tubercular mischief should be localized and should not infiltrate the lung round the cavity.

Localization of the Lesion.—This is the first point to be decided, and the decision may be attended with great difficulty. To decide the question, various surgical methods have been devised and put into practice; but these may be divided into two main classes—viz., the extra-pleural and the intra-pleural. Tuffier advocates the extra-pleural method, and the following are the steps of his operation:—A piece of rib, one centimetre in length, is resected. This allows the operator to strip the parietal pleura round the wound over an area at least equal to that of the hand. At the upper and lower border of the rib the pleura is rather firmly adherent; but, once detached at these two points, it can easily be stripped from the posterior surfaces of the ribs and intercostal muscles. After resection of the second rib, all the parietal pleura over the apex can be stripped, and then the anterior face of the posterior thoracic wall in the neighborhood of the first, second, and third ribs can be touched. Tuffier says that this stripping of the pleura allows a most satisfactory digital examination of the surface of the lung.

Bazy, on the other hand, prefers the intra-pleural method of exploration. He makes a small opening in the parietal pleura, introduces his finger into the pleural cavity and examines the surface of the lung, feeling more especially for pleuritis adhesions or a firm patch in the lung, these giving an indication as to the exact seat of the lesion. He then closes his exploratory incision and moves the field of operation to the seat of disease.

The Operation of Pneumotomy.—Terrier says that the necessary amount of rib having been resected and the pleura exposed, the two layers of the latter should be sutured together round a small area, so that the general pleural cavity is shut off from the field of operation. The pleura is now exposed, and the lung examined. If the latter feels resistant and of the consistence of leather, and is not very vascular, it may be incised with a bistoury; but if it is elastic, vascular, and congested, the opening into it should be made with a thermo-cautery at a dull red heat. The writer considers that washing out the cavity is useless and dangerous, more especially if it communicates with a bronchus. He recommends that the walls of the cavity should be dried with mops, and that a drainage-tube should be put in; but he calls attention to the danger of leaving the tube in position for too long a time, as it may cause hemorrhage by ulceration.

3 Felix Terrier, Surgeon to the Bichat Hospital, Paris, *Le Progres Medical*, abstracted for *Birmingham Medical Journal*.

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PHILADELPHIA, SATURDAY, FEBRUARY 20, 1897.

EDITORIAL.

THE PROPER SEASON FOR MEDICAL CONVENTIONS.

A contemporary has anticipated us, in referring in more particular terms than we had contemplated, to the unseasonableness of a recent important medical conference. We may be pardoned for a personal allusion, since our experience has doubtless been a fair representation of what has occurred to many another. After having been appointed for a paper, and having made arrangements to take a leave of absence from practice for a few days, we were, almost at the last moment, compelled to abandon the plan on account of pressure of professional duties which would scarcely have arisen at any other time of year. Only a few months previously we managed to attend another meeting, but were compelled to go equipped with umbrella and overshoes on account of the natural inclemency of the weather, and to hurry home from a city where there was much of interest to detain a visitor.

Medical conferences of various scope are all important attractions to the physician, and we wish to protest against the practice of holding them at times of the year when it is most difficult to leave practice and when the attendant pleasures of a trip from home are least in evidence.

Probably most physicians will agree that the worst inconvenience of a physician's life is the necessity of considering the possibility or the actual occurrence of professional calls at the sacrifice of the privilege of ordering one's own times of working. In these days one of the greatest pleasures of life, as well as one of the prime educational factors of the intelligent adult, consists in travel, in shaking off from one's feet the familiar dust, and in filling the lungs

with the atmosphere of a strange place, in throwing off the responsibilities which pertain to one known to a large proportion of the people whom he meets.

But the physician is most unhappily situated, so far as possibilities of travel are concerned, since his leisure is balanced by lack of means and his financial independence by professional obligations. Thus, the average physician must enjoy most of the pleasures and benefits of travel in connection with self-improvement at meetings of medical societies. Travel, in connection with professional engagements, is almost exclusively to uninteresting suburbs or to other near-by places, and at such times that a speedy return is necessary.

Hence, as a matter of common convenience, we advocate that medical meetings, except of a strictly local nature, should be held during the summer months, when the physician is most apt to be free from professional duties, when local societies,—medical, scientific, ethical and social,—and colleges are taking vacations. By holding meetings at this season, not only will the attendance be larger, but the members will be less fatigued, less harassed by the thought of possible failure to meet the demands of patients and by the expectation of an accumulation of work which awaits their return.

As a result, greater enjoyment and greater profit will be derived from the meeting itself, papers will be listened to with attention, discussions will be more interesting and the too prevalent feverish rush to get through a program with the consequent haggling over time allowances and the fervent gratitude to the man who reads his paper by abstract or who favors the society by staying away altogether, will no longer be the principal impression of the visitor.

In addition, the delegate from out of town will be able to travel more leisurely, he will have less difficulty in obtaining proper accommodations and he will often be able to add to the benefit of attendance on a professional gathering, the pleasure of delaying a day or two among friends or in viewing the objects of beauty and of interest, architectural, natural or historic, which almost every American city presents. He may also study the medical methods of his brethren by visiting hospitals, dispensaries and other professional institutions which abound in most places selected for the meeting of State, national or other general medical societies.

In objection, it may be said, that during the summer the doctor is apt to be away on a vacation. We believe, however, that he will, in most instances in which he is to be considered as a possible attendant at such gatherings, be only too glad to plan his vacation so as to combine medical improvement with recreation.

A Proposed Society of Digestive Specialists.

Dr. Charles D. Aaron, of Detroit, and Dr. A. P. Buchman, of Fort Wayne, have sent out circular letters asking the coöperation of physicians engaged in this new specialty. For the present, at least, applications for membership are in order from physicians especially interested in diseases of this nature, even though not refusing other cases. The ultimate object of the society, however, is to gain wider recognition for Digestive Diseases as a specialty and to secure the mutual support of physicians who are making a genuine attempt to limit their practice accordingly.

THE REPORTER will publish news or correspondence bearing on this subject, and will aid the proposed society so far as possible. It is suggested that the first meeting be in connection with the American Medical Association at Philadelphia, this year. Applicants for membership may address Dr. Charles D. Aaron, 32 Adams Avenue, West Detroit, or Dr. A. L. Benedict, 174 Franklin Street, Buffalo.

ABSTRACTS.

PUERPERAL CONVULSIONS FROM THE STANDPOINT OF PREVENTION.*

JOHN N. UPSHUR, M.D.,† RICHMOND, VA.

I cannot emphasize too much the importance to the patient of an early engagement of her medical attendant, that she may be closely in touch with him, and that he, by extraordinary diligence, may be keenly alive to every circumstance which may be to her a source of peril, giving to his patient advice as to personal care, of diet, exercise, rest, bowels and kidneys; making regular, often frequent, analyses of the urine, to determine the presence of albumin or the lacking elimination of excrementitious solids. Often there is danger ahead when urinary analysis is negative in its results, and the nervous system is ripe for a dangerous explosion so soon as something occurs to excite the requisite reflex. I cite the following cases for sake of illustration:

CASE I.—Mrs. T., a woman of fine physique and robust health, came under my care in 1885; she would never permit me to see her until labor came on, though reported by her husband as being very dropsical. Frequent examination of her urine failed to show any albumin, though the amount of urine was scanty. Treatment, through the medium of her husband, was, of course, very unsatisfactory. When labor came on, I found her the most dropsical woman I ever saw at term. She was kept under chloroform until delivered with instruments, after a protracted labor. In four succeeding pregnancies she was never so dropsical again, but each period of pregnancy was filled with symptoms of threatened eclampsia. The patient was a hearty feeder, her urine was unusually scanty, albumin apparent on analysis, but not marked.

In her third pregnancy she had an attack of vertigo, followed by a period of insensibility; she has always suffered with her head. Her treatment during each pregnancy consisted of low diet, abundant drinking of lithia water, and keeping bowels in a condition of mild diarrhea. She has usually taken chloroform during the latter part of the second stage of labor, and has been safely delivered five times without a single convulsion, and is now doing well in her sixth pregnancy, having reached the end of the sixth month.

CASE II.—Mrs. W., of delicate build, in her second pregnancy, during the ninth month had agonizing headache, which failed to respond to remedies; she saw flashes of light and other objects continually before her eyes. When labor came on she was kept under chloroform until delivered; her skin was so dry as to feel parched. Repeated examination of urine failed to detect any albumin. Within an hour after delivery she complained of not being able to see (she had had no undue amount of hemorrhage), and began to talk wildly and incoherently. Chloroform was given to control excitement, followed by full doses of potassium bromid and pilocarpin; the skin acted freely and all untoward symptoms subsided; the urine showed a large percentage of albumin. Convalescence was uneventful until the fourteenth day, when marked symptoms of septicemia developed, but she passed safely through a most dangerous illness.

CASE III.—Mrs. H. had been carefully watched during her second pregnancy. The urine was frequently analyzed, with negative results.

About the time she reached the fifth and a half month I was called to see her with a sharp attack of cholera morbus. A day or two of treatment was

* *Maryland Medical Journal*, Read before the Richmond Academy of Medicine and Surgery.

† Professor of Practice of Medicine in the Medical College of Virginia, etc.

sufficient to restore her health. She was discharged with caution as to imprudence in diet and every other respect. On the evening of the next day she went out to supper, ate very heartily of almonds and raisins. I was called early the following morning to see her in what her husband called a trance. When I reached her she talked to me rationally, and manifested no symptoms of special gravity. At 4 P. M. she was seized with a violent puerperal convulsion, quickly followed by a second, and for a few moments I thought her dead. I bled her freely from the arm, labor was brought on, and after delivery she made an uneventful recovery—the urine for the first time being loaded with albumin.

Her next pregnancy progressed satisfactorily to the ninth month, when she complained of distressing head symptoms, urine scanty, but free from albumin; some disturbance of vision. She was freely purged with calomel, gr. vj., croton oil, gtt. j., with complete relief of head symptoms. The week following, head symptoms returned. The dose of calomel and croton oil was repeated, with as prompt relief as at first. Labor came on a few days after, and she was safely delivered, without any complication; convalescence was speedy and uneventful.

CASE IV.—Mrs. D., primipara, aged twenty-two, stout and plethoric. I was retained six weeks before confinement. Frequent analysis negative, except once a trace of albumin, till October 12, when the urine was found loaded with albumin, being almost solid on boiling. I was called at 10 P. M., and found she had three convulsions, the cervix rigid, dilated the size of a nickel. She was bled freely from the arm; manual dilation was persisted in for five hours; the child was turned and delivered; there was a serious convulsion during the labor, which looked as though it would be fatal; no untoward symptoms occurred during convalescence. I found that she had been complaining for a week before the labor with violent headache. At the same time she had been eating enormously. I had not been consulted.

CASE V.—I was called in consultation to see Mrs. H., primipara, aged twenty-two. I saw her at 6.30 P. M. She gave the history of an unusually comfortable pregnancy. She had engaged her medical attendant two days before, and said she had passed sufficient urine. She awoke at 5 A. M. the same morning with severe headache across the vault of the cranium, extending over the occiput and down the back of her neck, and some abdominal pain, which was supposed to be colic, as her time was not up (280 days) till two weeks later. She had been abstemious in her diet during the latter part of her pregnancy, abstaining from eating any supper. Just before 3 P. M. she described a sensation in her head as if blood was trickling through it, and a few moments later a violent eclamptic seizure developed. Her medical attendant, when he saw her in the morning, had ordered one-eighth grain doses of sulphate of morphia every two hours—she having taken in all about seven-eighth of a grain. So soon as he saw her after the convulsion he bled her freely and administered chloroform, controlling the convulsion. When I saw her she was completely relaxed, os fully dilated, and bag of water filling the vagina—ruptured accidentally on my examination. Labor progressed satisfactorily and she was delivered of a live baby at 8.15 P.M. —skin hot and dry, pulse soft, feeble, and 120 per minute—profoundly unconscious. Another convulsion at 9 P. M. No secretion of urine since early morning; an enema of bromid of potassium, sulphate of morphia and camphor was administered, and she passed into a quiet, natural sleep, having a good night, with the exception of slight restlessness. She had also a hypodermatic of one-twentieth grain sulphate of strychnia. On the next day she had three more convulsions, but of diminishing severity and longer intervals; her vision was impaired and she was unable to recognize her friends before the third day; periods of consciousness alternated with periods of delirium.

The baby had one convulsion on the day subsequent to its birth, but afterwards did well.

The cases cited as illustrative emphasize, first, the necessity of early engagement and subsequent close supervision. Case I shows how such care warded off

trouble in five pregnancies. Case II points to threatened trouble indicated by the severe head symptoms, with negative evidence from urine, and, with Case V., emphasizes this symptom, and the hot, dry skin—relief coming when the skin and kidneys had their functions restored. Cases III and IV point to the necessity of careful dieting and the overloading of the stomach as an exciting cause—in the one case no albumin, and in the other albumin only twice discovered prior to the development of convulsions. Where there is excessive eating, a hyper-nutrition is the result in a system in which there is already a hyperplastic condition of the blood. The attempt on the part of the kidneys to eliminate increased effete matter begets kidney irritation—they fail in their function and the appearance of albumin in the urine is the external manifestation of poisoning of the system by toxins, which, unless eliminated, result in the eclamptic explosion.

The patient's diet should be nutritious, digestible, not rich; regular exercise in the fresh air, and especial care of the bowels and kidneys.

The administration of saline cathartics should be frequent, making the mucous membrane of the bowels eliminative and derivative; an abundance of lithia water and other diuretics, are necessary to stimulate the kidneys. If the patient shows evidence of anemia, full doses of the tincture of the chlorid of iron, long continued, will be of value.

The treatment of the case when convulsions occur, I believe, consists imperatively in free administration of chloroform and prompt bleeding, with active purgation if the bowels are constipated; nor should we forget that the welfare of the patient depends upon as prompt delivery as possible—by manual dilatation of the womb and forceps or turning. When, as in Case V, the patient remains unconscious after delivery, with symptoms of depression, as evidenced by rapid, feeble pulse, a hypodermatic of strychnia nitrate will do much good by action in sustaining the heart and diminishing cerebral congestion by its toning-up effect on the vaso-motor nervous system and at the same time sustaining the uterus in firm contraction.

I am convinced of the usefulness of morphia in conditions of rigid os and cervix in the first stage of labor—but if there be symptoms of threatened eclampsia, it is positively contra-indicated, and should not be given in the treatment of the convulsions; it arrests secretion in the skin and kidneys and favors the retention of the effete materials in the system.

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated meeting, January 27, 1897.

The President, DR. JAMES TYSON, in the chair.

The retiring President, Dr. J. C. Wilson, read his

ANNUAL ADDRESS.

(See page 225.)

DR. EUGENE L. VANSANT presented

A BRIEF REPORT OF THE RESULTS OF A BACTERIOLOGIC INVESTIGATION OF THE NASAL MUCUS OF ONE HUNDRED CASES OF CHRONIC NASAL DISCHARGES; WITH SPECIAL REFERENCE TO THE PRESENCE OF THE KLEBS-LŒFFLER BACILLUS.

(See page 233.)

DISCUSSION.

DR. A. C. ABBOTT said that the paper of Dr. Vansant is one of several showing that the diphtheria-bacillus, like other pathogenic bacteria, is liable to fluctuations in the degree of its disease-producing power. In earlier days the diagnosis was made, not alone by the microscopic detection of organisms having a definite shape and appearance, but it was requisite also that the organisms found should be cultivated, and inoculated into animals; and a diagnosis of diphtheria was made only when the inoculation proved fatal to the guinea-pig. Of course the time necessary to carry out this method in detail rendered impracticable its employment on a large scale. Experience has shown that it is not necessary to employ all the culture and animal tests, but in cases in which the clinical diagnosis justifies the suspicion of diphtheria, the finding of diphtheria-bacilli by microscopic methods alone is regarded as justifying the

diagnosis of diphtheria. In the course of this work, it was found that from time to time cases arose that were clinically not diphtheria; such, for instance, as those referred to by Dr. Vansant. In 1890 or 1891, Dr. Abbott reported the results of examinations of a group of cases of ordinary sore throat, such as one sees in every dispensary, in three of which he found organisms that were not distinguishable by their microscopic appearance or by their cultural peculiarities from the typical diphtheria-bacillus, but they were without virulence, and when introduced into animals did not produce the disease. Such evidence simply teaches that the diphtheria-organism must be regarded as are all pathogenic forms; viz., as liable to fluctuations in virulence. Papers of the kind that Dr. Vansant has just read in no way weaken the proof of the causal relation of the bacillus diphtheriæ to true diphtheria. They simply illustrate that diphtheria-bacilli of low virulence may cause conditions other than that of true diphtheria as usually seen. The condition of membranous rhinitis is undoubtedly a modified diphtheria. In most cases, it causes no constitutional manifestations. In a certain number of instances, on the other hand, it is capable of giving rise to actual diphtheria in individuals with whom the patient comes in intimate contact. It is also capable of transmitting this peculiar, modified diphtheria, rhinitis. In these cases, practically without exception, the diphtheria-bacillus can be found.

Dr. M. V. Ball considered it unfortunate that the observations recorded were not supplemented by animal experiments. Recent workers studying the pseudo-diphtheria bacilli, especially in England, have found that it is very difficult to distinguish the various forms of diphtheria-bacilli in regard to their pathogenic properties, unless inoculated into animals; that in both form and culture-appearances they are indistinguishable and, therefore, it may be possible that many of the bacteria or bacilli that Dr. Vansant calls diphtheria-bacilli are really not such.

Dr. A. C. Abbott said, *apropos* of Dr. Ball's remarks concerning the so-called pseudo-diphtheria bacilli: For some time there was a warm controversy over the significance of those organisms which are morphologically and biologically identical with the true diphtheria-bacillus, but which differ from it in being more virulent. By some they were regarded as a distinct species, by others as modified diphtheria-bacilli. The latter view is now held by most of those who have had much practical experience in the work. It was held by Lœffler and others that the differential test is the ability of the one, designated as the true diphtheria-bacillus, to kill guinea-pigs, with definite pathologic lesions, and the inability of the other, called by them the pseudo-diphtheria bacillus, to kill the animal, although they may have been identical morphologically and biologically. On several occasions, Dr. Abbott has encountered the organisms that have been referred to as pseudo-diphtheria bacilli. While they do not kill animals, they have nevertheless the power to cause a local lesion at the site of inoculation that is histologically indistinguishable, save in degree, from that induced by the fully virulent diphtheria-bacilli. There seems no reason for regarding them as a separate species; it is much more natural to consider them as slightly virulent or non-virulent diphtheria-bacilli.

Dr. Abbott has always opposed the idea that the so-called pseudo-diphtheria bacillus and the true diphtheria-bacillus are distinct organisms. That they differ merely in degree is the opinion held by the majority of bacteriologists of to-day.

The term "pseudo-diphtheria" bacillus should be reserved for organisms in some respects like the diphtheria-bacillus, but still readily distinguishable from it by culture-tests, aside from the question of pathogenesis.

Dr. Frank Woodbury said that he was so fortunate as to have had an opportunity, with Dr. Vansant, of studying clinically some of the reported cases, and he was struck by the fact of the entire absence of the ordinary symptoms of diphtheric poisoning and by the presence of evidences of impaired health of a different character from those ordinarily recognized as belonging to the disease diphtheria. It seems therefore that Dr. Vansant has unveiled the true cause of a new disease—one that has been hitherto overlooked—a sort of chronic diphtheria. His results are of great importance from the standpoint of the general practitioner, because, should a case such as he has reported have an attack of ordinary tonsillitis or of catarrhal pharyngitis and cultures be taken from the nasal passages or the throat, there would be secured the evidence bacteriologically of the existence of diphtheria and the positive diagnosis might be made on that point, although it is true that authorities warn against the error of making the diagnosis strictly from the bacteriologic investigation. It may be mentioned that MacFarland, in his recent work on *Bacteriology*, directs attention to this fact, that the diagnosis of diphtheria must not be based solely on the bacteriologic test, apart from the usual clinical manifestations of the disease. It has been known for a long time that disorders of the air-passages, malformations and abnormalities of different kinds, chronic inflammations, etc., have been accompanied by impairment of the general health. The researches that Dr. Vansant has made may possibly throw some light on the real nature of some of these and show that they are really toxemias or toxinemias and that the treatment should not be simply surgical, but should be bacteriologic and antiseptic, and under such treatment the general health will improve, even though the physical conditions in the nose may not be altered by removing the obstructions referred to. There is no distinction between pseudo-diphtheria bacilli and true diphtheria-bacilli, because it is entirely in the

line of Pasteur's researches upon the virulence of bacteria that this is an incidental and not an essential quality of bacteria, that the pathogenic properties may be increased or diminished, or may be entirely lost, and the bacteria remain the same, and then, under other circumstances, by reversing the process, the virulent property may be regained.

At present, information is wanting on the conditions that the diphtheria-bacilli require, in order to develop the extreme virulence manifested in some cases that come under notice, so that death may be determined in a few hours, while in other cases, as Dr. Vansant has shown, the same bacilli may remain in the air-passages for months and cause only slight impairment of health.

DR. S. SOLIS-COHEN said that he had not intended to say anything, but Dr. Woodbury speaks of "chronic diphtheria" as being a new discovery of Dr. Vansant's. Dr. Vansant's paper is too good to be overweighted with false praise. It teaches much, but not this particular fact. Sir Morell Mackenzie called attention to the existence of chronic diphtheria twenty years or more ago. Dr. Cohen spoke with some feeling on this subject because a few years ago, with Dr. Eshner, he published a little work in which he called attention to this fact,* and the work was, in the common phrase, "jumped on" by a certain reviewer for "the superstition of chronic diphtheria." One point this paper serves to show is that a keen clinical observer often runs ahead of the bacteriologist and that the results of bacteriology usually confirm good clinical observations.

There is, however, another point of very great interest here. The question is: Does the development of diphtheria in a certain patient depend entirely upon the bacillus? Does it depend upon what has been termed the grade of virulence of bacilli, or has not the personal reaction of the patient very much to do with it? Dr. Cohen believed that he had competent support in the belief that personal reaction—the reaction of the body against the invading germs—has much to do with the results of inoculation. It is true that certain bacilli, when injected in any animal of a given species, will produce the same results, but in many of these so-called grades a culture will produce lesions quite grave when injected in one animal, and the same culture injected in another animal will produce little or no effect. Now, it is quite possible that the varying degrees of virulence are due to the personal reaction of the affected individual; that the bacilli, in other words, are modified favorably or otherwise by the culture-medium; and that notwithstanding their presence in a certain individual, he cannot be said to have or ever to have had diphtheria. Varying degrees of personal resistance exist; in other words, differences in the constitutions of patients—an old-fashioned idea, but one which even the progress of bacteriology will not set aside.

DR. FRANK WOODBURY added that he had not intended to confine his observation to the impairment of health due entirely to the diphtheria-bacillus, but to the presence in the nasal chambers of all or any micro-organisms, including the entire group that may cause chronic septic infection. This process is not necessarily specific, certainly not necessarily chronic diphtheria, but the toxemia might be mixed or it might be non-diphtheric, and yet the patient may have ill health clearly attributable to the development of micro-organisms and their products. Dr. Woodbury cited the case of a patient in whom only the bacillus subtilis was found, and no bacillus diphtheriæ at all, yet the patient had impaired health, and her health was much improved mainly by antiseptic treatment of the nasal passages.

DR. E. L. VANSANT agreed with the view in regard to the various gradations of virulence of diphtheria-bacilli. At the same time it seems to be proved that a large percentage (26 per cent.) of the cases examined had diphtheria-bacilli in their nasal secretions, and, furthermore, that these bacilli are true diphtheria-bacilli. The bacteriologic examinations were made with the greatest care by Dr. Gillespie, an experienced bacteriologist. The cultures in many instances were tested many times. Such results, therefore, must be taken into consideration in the diagnosis in any case in which diphtheria is possible. The suggestion that the germs present lead to more or less ill health by causing a chronic toxemia throws still further light on the subject, and is of great interest when one considers the large number of cases that come under observation with what are called catarrhal conditions of the nose and throat. In these cases a history something like this is frequently obtained: A child, previously in good health, following some acute disease, such as measles, whooping-cough, scarlet fever, etc., has a chronic catarrhal condition of the nose and throat. There has undoubtedly taken place a chronic sub-acute inflammatory condition of the upper air-passages, with altered secretions, which soon become infected. The noxious matters are then absorbed by the lymphatics and very shortly cause enlargement of the glandular tissues of the pharynx. Soon adenoids, enlarged tonsils, enlarged glands appear at the angle of the jaw, etc. Some of these cause obstruction to normal respiration and this adds to the ill health present. In some cases such catarrhal conditions are preceded by an inherited or acquired predisposition, *e. g.*, to gout or syphilis, which increases the liability of the individual to such affections. A point that could probably have been dwelt upon more extensively in the discussion is that of possible contagion in cases of atrophic rhinitis and purulent rhinitis. It is a common experience to find chronic purulent rhinitis or atrophic

* Essentials of Diagnosis, p. 78. Phila.: W. B. Saunders, 1892.

rhinitis present in several members of a family.

DR. S. SOLIS-COHEN read a paper on

THE "SCHOTT METHOD" OF GYMNASTICS IN THE TREATMENT OF CHRONIC DISEASE OF THE HEART, WITH REPORT OF A CASE, AND DEMONSTRATION OF THE EXERCISES, BY DR. CHARLOTTE WEST.

(See page 227.)

DR. J. MADISON TAYLOR expressed interest in all forms of treatment that depend upon such simple measures as regulated exercises. Physicians have surely begun to appreciate the limitations of the effects that can be accomplished by treatment without drugs. Dr. Taylor has watched the Bad-Nauheim treatment and has employed it with certain modifications with excellent success. The so-called Schott treatment has become popular in England through the industrious circulation of men like Bezley Thorne; but in Germany the originator of this method is well known to be Professor Beneke, whose two principal assistants were Drs. Grœbel and Schott. The latter did not hold the same high official position with relation to the treatment as did Grœbel. The man at Bad-Nauheim to whom patients are most usually sent by Continental physicians is Medicinalrath Dr. Grœbel. It is a pity that this most admirable method of treatment, from which such excellent results could come (if only people had the patience to pursue it), should be named after any one man, unless he were the sole originator. Nevertheless, the brothers Schott have brought this treatment to a very high degree of perfection and they have given it an element of prominence, or as Americans would say, have given it a "boom," which has made it reach America by the way of England. If this system, composed of special baths and regulated exercises, were known, as it should be, as the Bad-Nauheim treatment resulting from the labors of the men named, and not merely that of the Schott brothers, the designation would be more accurate and the treatment would secure the standing that it deserves. There is no question, however, about its value, and the different gentlemen who practice it differ very little in their methods. The only difference between the Schott and the Grœbel exercises (and they are both precisely the same as the so-called Swedish or regulated movements) is that in the Schott treatment a good deal of emphasis is placed on treatment of the region of the heart. The manipulations are begun with superficial massage, involving chiefly the back and limbs; then the exercises are proceeded to by gradual degrees, the passive form of exercise being first pursued and then the more active forms, as rising steps that come up through all these regulated gradations of mechano-therapy. In Dr. Grœbel's method the patient is directed between exercises to take long, steady, deep inspirations, and also there are times when the patient is instructed to rest or sit down for a bit, according to the degree of fatigue-reactions he shows. There are various points that should be watched, the condition of the skin, slight tendency to sweat, etc.

As to the practicability of these and similar exercises, they certainly can be pursued even here and partially to great advantage if intelligently directed. One of the forms of disturbance hardly to be called a distinct disease not alluded to by Dr. Cohen, was the vaso-motor ataxias (his own term)—conditions in which vaso-motor disturbances manifest themselves in tachycardias or circulatory disturbances of various sorts, with oftentimes enlarged heart, etc.

The patient about whom Dr. Taylor knew most as having pursued this treatment thoroughly, had originally a very considerable tachycardia with enlarged heart, and is now practically well. He did all that he could for her, and others of the highest authority did the same, without conspicuous benefit. She finally went to Europe, took the full Bad-Nauheim treatment and recovered.

Dr. Taylor frequently uses regulated exercises in the treatment of disordered hearts when greater quiet had been recommended, and finds the method amply justified. Especially is this true when certain hydropathic measures accompanied. The secret of success is understanding the capabilities and needs of the case and cautiously, but most systematically increasing activities—always intermitting these upon evidence of over-strain of any kind.

DR. JOHN H. MUSSER presented some diagrams of cases treated by the method described that he had the opportunity of studying.

The first series included three diagrams from a case of dilatation of the heart at the Philadelphia Hospital. Dr. Musser has been able to satisfy himself of the correctness of the results pointed out by Dr. Cohen, namely, that after treatment there is a diminution in the area of cardiac dulness, that there is a change in the position of the apex-beat of the heart, and with this there is also marked diminution in the pulse-rate and, of course, secondarily relief from the cardiac symptoms. The treatment was begun on January 16th, and continued for twenty minutes. The patient presented all the subjective and marked objective symptoms of cardiac dilatation, and there was no change whatever in the area of dulness after the first treatment. In the succeeding treatments there was great diminution in the area of cardiac dulness. The last diagram shows the remarkable change that took place in the area of cardiac dulness, as compared with the first. In the first diagram the right border of cardiac dulness extended one-half inch to the right of the sternum; to-day the right border is at the middle line of the sternum, while the limit of the left border of cardiac dulness has fallen inward. The apex-beat, which had been in

the sixth interspace in the nipple line, receded to the fifth interspace, and while at first at the nipple, fell half an inch within that point. The pulse-average was 90; it became 64. The same remarkable changes were observed in other cases. In a patient, in private practice, the apex-beat had fallen one and a half inches internal to what it was three weeks before, and the relief experienced is most remarkable. She now sleeps perfectly during the entire night; she is free from cardiac asthma or dyspnea—indeed, has no symptoms whatever referable to the heart. She had a pulse of 80 when the treatment was commenced, which became usually 60 and 65. Dr. Musser corroborated the change in the character of the pulse-tracings indicated by Dr. Cohen. The tracings show the same character of change in the pulse—the volume and strength are increased, the rhythm, in cases in which there had been irregularity, becoming normal. Dr. Musser admitted it as possible that good luck had attended the treatment in the five or six cases managed in this manner, but thus far he agreed with Dr. Cohen in lauding the method, which seems to be a very satisfactory therapeutic measure without the administration of drugs.

Dr. Musser is not satisfied, however, with the gymnastics alone, but proposes to use also the baths. As pointed out by Thorne, these can be improvised at home. It is probably better, however, that the patients should go to Nauheim, where they can have the benefit of the surroundings, which play an important part in the cure; but this is not absolutely necessary, and a bath of the same chemic composition can be prepared elsewhere.

DR. T. J. MAYS said that the puzzling part about this treatment is in regard to the claim that the area of cardiac dulness diminishes, and that peripheral blood-vessels dilate during and after each exercise. The possibility of the former is evident, but not through muscular exercise alone. In regard to the pulse-rate and the respiration-frequency: physiologists teach that the slightest exercise will increase the rate of the heart and also of the respiration. Now here an increase of muscular exercise and of muscular action is attended with a reduction in pulse-rate and also in respiration-frequency. It can very well be understood how the pulse could come down in the course of a few weeks' or months' treatment, but that it should come down at once is inexplicable on the score of the knowledge we have of the physiology of muscular exercises pure and simple.

DR. JAS. TYSON said that he had two cases under treatment at the University Hospital by the imitated Nauheim baths only, in one case associated with massage, pursuing this part of the treatment as the easier and more feasible. One is a case of marked arteriosclerosis, the other a case of advanced mitral disease with dilatation of the heart and effusions into the abdominal cavity and one pleural sac. The improvement in the first case was gradual but positive. Here, as in some of the cases alluded to, a very pronounced albuminuria became gradually reduced, and the general improvement of the patient, with removal of the dropsy, better action of heart and lungs, was marked up to a certain point. The case has, however, come to a standstill, beyond which it seems impossible to carry the patient to anything like practical recovery.

In the other case, which is more serious, with abdominal and pleural effusions, after the first bath the apex of the heart rose from the sixth to the fifth interspace. This case has had only two baths and the treatment has not been continued long enough to produce any decided effect, excepting in so far as the apparent very remarkable reduction in the size of the heart observed after the first bath.

DR. S. SOLIS-COHEN said that the reason he termed this paper "The '*Schott Method*' of Gymnastics in the Treatment of Chronic Disease of the Heart" is because that is exactly what the communication is. The gymnastics *plus* the baths constitute the Nauheim treatment, but having had no experience with the baths, he had restricted his remarks to the exercises. Now as to the name of Schott as applied to this method:

In the first place, these are the exercises devised and carried out by the brothers Schott. Beneke wrote upon the value of the Nauheim waters in the treatment of gout, osteoarthritis, rheumatism and that class of disorders; and Grœbel uses a kind of mechanical resistance in place of the intelligent operator of the Schott system. The exercises themselves vary also.

Dr. Cohen was gratified to hear of Dr. Taylor's experience in regard to vaso-motor ataxia, because he has been long searching for a good system of treatment for this group of affections. He had indeed instituted the treatment in some cases and he finds that Dr. Bezley Thorne, among others, reports great improvement in such affections.

Dr. Cohen purposed to use the baths at the Polyclinic Hospital on a private patient and he hoped to have some favorable experience to report later. He submitted additionally a tracing which showed the effect of a month's treatment upon a patient with advanced mitral regurgitation and interstitial nephritis who came under observation October 14, 1896. One would scarcely imagine from the tracing that the patient was the subject of serious heart-lesion.

As to the points raised by Dr. Mays, the fact of the subsidence of pulse and respiration is undoubted. In some of the records handed around, pulse, temperature, and respiration, before and after the exercises, are carefully tabulated. Thus the pulse in one case falls from 96 to 72, at another time from 84 to 68, and so on. The respirations do not increase because they are not allowed to. That is an essential part of the treatment; and that is why the results of this form of exercise differ from those of all other forms. As to the pulse,

the explanation seems simple. Dr. Schott invoked a reflex influence on the pneumogastric, but that seems hardly necessary. The caliber of the arteries and the whole peripheral area of blood-distribution in the skin and muscles, including the lymph-spaces, is increased. Hence, a larger flow of blood passes in a given time, the heart contracts better, and the rate is lowered. Although the increased muscular area of blood-distribution is the most important factor, the fact is undoubted that the caliber of the arteries is increased. One's fingers will tell him that at the radial pulse and the sphygmograph will show it. Dr. John Broadbent and Sir William Broadbent have published a careful study in the *Practitioner*, and the explanation given of the results of the exercises is taken from these papers and that of others cited. Sir Philip Smyly, for instance, says:

".....There will ever be a feeling against this treatment until it is clearly seen and believed to be true:

"1. That the movements relieve the back pressure on the heart.

"2. That the diminution in the size of the heart is due to the absence of excess of blood in its cavity.

"3. That this is attained by there being more room in the arteries.

"4. That the heart-muscle gains strength by having room to contract.

"5. ....That the contraction being more complete, it takes a longer time, thus making the pulse slower, and, at the same time, fuller.

"6. Being able to send on more blood, it is ready to receive more, and thus removes venous congestion.

"7. The strength gained by the heart is due to the freedom to contract fully."

Dr. Cohen has not yet felt justified in forming a theory from his own observation at variance with that which has been formulated as the result of prolonged study by the men quoted, and, indeed, so far as his theoretic knowledge would carry him, it seems to be a perfectly simple thing. By gentle exercise, well distributed and not suffered to increase respiration—that is, by peripheral pumping—a load is taken off the heart, and the natural result of increased fulness of the pulse and diminished rate of the heart must go together. In the permanent result, increased nutrition plays no mean part.

DR. T. J. MAYS said that it is important to decide on a scientific basis the question as to whether the peripheral circulation dilates or not under this mode of treatment. Many of the sphygmograms with which Dr. Cohen illustrates his paper show a higher pulse tone or tension after than before the treatment, and if any deduction can be drawn from this, it certainly is that the peripheral circulation does not dilate, but that it contracts under such exercise. Hence, there must be other factors involved in the production of the good effects of this treatment than the supposed distention of the peripheral blood-vessels.

DR. ANDREW J. DOWNES exhibited

A PORTABLE CYLINDER OF ACETYLENE GAS FOR SURGICAL ILLUMINATION, A SELF-RETAINING DOUBLE-BLADED WIRE VAGINAL SPECULUM.

(See p. 236).

PROCEEDINGS OF THE PHILADELPHIA PEDIATRIC SOCIETY.

The regular meeting of the Philadelphia Pediatric Society was held January 12, the President, J. P. Crozer Griffith, M.D., in the chair.

DR. FREDERICK A. PACKARD presented a patient who had

Dilatation of the Stomach.

Dr. Packard said:

I have not as yet quite finished the study of this case, and felt some hesitancy in presenting it, but the boy shows so finely the outline of the large dilated stomach, probably entirely of congenital origin, that I thought it worth while to bring him to the meeting. He is fourteen years old and goes to school. There is no family history or previous history bearing upon his condition. His mother says that since he was one year old his abdomen has been extremely large, particularly in the upper zone. About the condition of the abdomen at an earlier age than that the mother can tell me nothing.

The boy complained chiefly of dyspepsia, occasional vomiting with a large amount of vomitus, occasional attacks of diarrhea with offensive movements, and during the past summer a fleeting attack of jaundice, which I think had nothing whatever to do with his main trouble with the stomach. He is much bothered by shortness of breath on exertion. There has been at no time any sign of any growth pressing upon the pyloric orifice of the stomach, and I take it that the case is probably one of congenital dilatation of that organ.

The enormous dimensions of the stomach can be seen not only by the outline marked on the surface, but by the great anterior projections of the upper zone of the abdomen. By combined auscultation and percussion the stomach is readily outlined as being one of extremely large size, reaching from the lower border of the third rib to the umbilical level in the left vertical nipple line and extending posteriorly to the posterior axillary line. So nearly as could be determined, the pylorus lies

in the right vertical nipple line. The heart is considerably dislocated, the apex being under the third rib. The heart itself is normal. No other abnormality is found on physical examination.

My first thought on seeing him was that it might be a case of congenitally dilated colon, somewhat like the specimen removed by Dr. Formad, which is at present in the Mutter Museum. Auscultation and percussion show it to be entirely independent of the transverse colon, while the symptoms are gastric rather than intestinal.

On one occasion when he came to the Out-Patient Department of the Pennsylvania Hospital at 11 A. M., we gave him a seidlitz powder in two portions, and there was absolutely no difference in the stomach tympany at the time. Suddenly at 5 o'clock that afternoon the boy complained to his mother that he was faint, became pale and complained of fulness in his stomach. The mother states that the abdomen was distinctly more swollen than usual, the fulness being almost entirely confined to the upper portion.

We have never been able to see peristaltic waves, even when we tried electricity and the external application of cold to the abdomen.

The test of absorptive power by the administration of potassium iodid and testing the saliva with starch-paper, and the examination as to motor power by salol showed that neither of these departed from the normal. The surer test of these functions by the use of the stomach-tube in the early morning could not be practised, owing to the fact that the boy lives at a remote and rather inaccessible portion of the city.

The treatment adopted has produced quite decided improvement in his symptoms and possibly in the size of the organ. His diet has been carefully regulated; a bitter tonic with sodium bicarbonate has been given before meals, and he has had two seances each week with a strong, slowly interrupted faradic current. The use of the button electrode within the stomach has not been tried, but might be of value.

DISCUSSION.

DR. E. E. GRAHAM.—I believe this is a case of dilatation of the stomach. I have been fortunate enough to see a number of these cases and I have been struck by the fact that the prognosis in the cases I have seen is, I think, much more favorable than one would suppose from a study of text-books. I have had continuously under my observation a case that was reported by Dr. Hare in Keating's "Cyclopedia of the Diseases of Children." The symptoms in that child were evidently classical for dilatation of the stomach at the time Dr. Hare wrote the article. The child has apparently grown up to its stomach and at present suffers little, if at all, from its condition.

I think this must very often occur in early infancy. Bottle-fed babies so often are overfed and their stomachs dilated, at least temporarily, to an unusual size, I think they very commonly suffer from acute gastric dilatation. So many of these children recover and develop into healthy boys and girls that I have been led to the conclusion that perhaps in early infancy acute dilatation of the stomach is a comparatively common disease, and in early childhood a moderate amount of gastric dilatation is not incompatible with perfect recovery.

DR. S. SOLIS-COHEN.—When was that area marked out, Dr. Packard?

DR. F. PACKARD.—This morning, when he was lying on his back.

DR. COHEN.—Does it change from day to day?

DR. PACKARD.—Very slightly.

DR. COHEN.—Has it been examined with a diaphane? If not, it would be interesting to make such an examination. The method is useful in delimiting the upper and lower curvatures, but not so satisfactory in marking out lateral aspects.

I agree with Dr. Graham, from my limited experience, that moderate dilatation is not uncommon in infancy and in a little while children seem to get much better, but I should be very much surprised to see a child "grow up" to that stomach.

THE PRESIDENT.—It seems to me very likely that the condition of dilatation of the stomach is more common than we imagine, particularly in rickety infants. It is certainly known, as shown by autopsy, that dilatation of the stomach may occur in rickets, and it is very probable that the big belly of rickety children, which we put down as a rule to intestinal catarrh, is due in part, at least, to a dilated stomach.

There is no reason why the atony and dilatation taking place in the intestine should not extend to the stomach as well. If we examined for it more carefully, perhaps we would find dilatation more frequently in these cases than we do.

DR. PACKARD.—I carefully inquired in regard to the possibility of rickets and also in regard to any marked digestive disturbance during the first year, and I could find no cause to suspect the presence of either.

DR. ALFRED STENGEL presented a case of

Chorea followed by Arsenical Neuritis.

DISCUSSION.

DR. MORRIS J. LEWIS.—This case has interested me very much, and although I admitted the patient into the Orthopedic Hospital and Infirmary, I only had personal charge of him in the hospital for a few days, as I then took my vacation. My almost invariable rule is to put all cases of chorea under increasing doses of arsenic, generally beginning with three drops three times a day, and the case in question had arsenic in the form of Fowler's Solution, given in this manner until the daily dose reached thirty drops, when it was stopped, as gastro-intestinal symptoms supervened.

I have given arsenic so often in chorea that I have grown to look upon it as a safe remedy in childhood. Ten drops three times a day I do not consider a large dose, as I have often seen it exceeded, not only without harm, but with decided benefit, and this is the first case of arsenical neuritis, from the use of the drug in chorea, that I have seen, or that has occurred at the infirmary, to my knowledge, and a very large number are treated there each year.

DR. S. SOLIS-COHEN.—I should like to ask Dr. Lewis and Dr. Stengel what was the manner of increasing and decreasing the dose of arsenic in this case and whether they have observed that poisoning, or toxic symptoms of any kind, nervous or others, occur more readily when the dose is increased slowly and decreased abruptly than when it is increased rapidly and decreased slowly.

DR. LEWIS.—I have always given arsenic in increasing doses of one drop a day, although I believe some of my colleagues advance faster than this. I increase the dose until toxic effects, in the form of edema of the eyelids or of gastro-intestinal irritation appear, when I instantly fall back to the doses taken about a week before, which would be about four to six drops less, to increase again until the same symptoms reappear, again falling back, and so on. I have gone to fifteen drops in this manner three times a day with no toxic effect whatever. This case I find had had slowly-increasing doses of Fowler's Solution, until thirty a day were reached, when it was stopped suddenly.

DR. COHEN.—The reason I asked that question is that I have been taught and it is my experience that in adults and in older children there is much more likely to be disturbance from arsenic if its use is stopped suddenly after long continuance than if withdrawal is gradual; and I believe there are cases on record of arsenic-eaters who have shown symptoms of arsenical poisoning only when removed from the region of arsenical springs, as in the case of the Styrians, or suddenly taken off the drug when they have been in the habit of taking it medicinally or as an indulgence. The fact probably has no bearing upon the case before us, but the query was suggested by the history.

DR. A. A. ESHNER.—It was my privilege to see this case both during Dr. Lewis' absence and afterward, and I rather suspect that I was responsible for the quizzical note as to whether the case was one of infantile palsy or of peripheral neuritis. I am inclined to agree with the diagnosis of peripheral neuritis. One point, however, thus becomes rather difficult of explanation, that is the presence (at times exaggeration) of the knee-jerks. I should, under ordinary circumstances, expect that with preservation of sensibility and with interference with the nervous paths through the anterior roots of the spinal cord in which pass motor and trophic fibers with this interruption in the reflex arc, there should be rather absence or enfeeblement of the knee-jerks.

In the absence further of sensory changes it seems that the differentiation between peripheral neuritis and anterior polio-myelitis becomes exceedingly difficult, because the symptoms under these circumstances are all substantially the same. In peripheral neuritis the lesion is simply in the periphery of the lower portion of the motor tract, while in anterior polio-myelitis it is in the spinal or central portion of this tract. It struck me as I saw the boy here to-night that while the peripheral lesions are practically symmetrical the wasting is more marked in the right lower extremity, and the superficial temperature as conveyed to the hand is here also lower. The disturbance of gait is also one of the doubtful features of the case. In the absence of sensory changes and of evidence of disease of the posterior columns of the cord or of the cerebellum, this ataxia may be attributed to the motor weakness. While, as has been indicated, the evidence points largely to the case being one of peripheral neuritis, there are certain facts that do not free the diagnosis from all doubt.

DR. J. P. C. GRIFFITH.—Do you think this boy has improved?

DR. STENGEL.—He has improved some. Undoubtedly this poisoning did occur with a very proper therapeutic dose and in cases of chorea I have often given a great deal more than ten drops three times a day, and in some cases of other kinds in children, one case in particular that I am now treating—a child having what I believe to be a Hodgkin's disease—I have used very much larger doses without feeling that I was giving, in any way, dangerous doses.

So far as the mode of administration is concerned, I can see no indication, from a search of literature, that one way of giving the drug is more trustworthy than another way. Perhaps gradual ascending doses are safer, because patients get accustomed to them.

Most cases of arsenical neuritis do get well if the patient is not suffering with pronounced constitutional manifestations of arsenical poison. As to the diagnosis in this case, I agree with what Dr. Eshner says, and I find myself on two very uncomfortable horns of a dilemma. There is evidence in favor of both of the diseases named. The question is between arsenical neuritis with preserved knee-jerk and sensation, and polio-myelitis with knee-jerks that are sometimes very much exaggerated and legs that are not very much atrophied and with a bilateral disease that is almost symmetrical on both sides. The latter is more difficult to explain than a neuritis with some deviations from normal course.

DR. C. S. POTTS presented a patient with

Progressive Neural Atrophy.

The knee-jerks and plantar reflexes were both abolished and the typical deformity of

talipes cavus existed. He stated that there have been but three such cases reported in this country.

DR. M. H. FUSSELL presented two cases of

Cretinism,

And read a paper upon that subject. Both patients were males, one six years old and the other eleven. In the younger patient the family history was negative. He was three years old before he began to talk, but has lately improved rather rapidly in speech. He walked when twenty-two months old and his first tooth appeared much later than usual.

His symptoms were typical of cretinism. There was no goitre; all the long bones were bowed, the joints enlarged, the skin thick and rough. He first came under Dr. Fussell's charge September 2, 1895. He was then given one grain of thyroid extract three times a day for three weeks, and became better and brighter immediately. He increased in weight and size progressively.

Played all day three months after his first appearance; walked a mile at a time, and his feet grew much larger in size. The anterior fontanelle entirely closed; mouth closed and did not dribble. He gained six inches, but the past few months' growth has not been so rapid as the first few months. Dr. Fussell thought perhaps this was due to his not taking quite so much thyroid. He now seems in a really normal condition.

The second case gained six and one-half inches under thyroid treatment. He presented himself one year ago. Family history was negative. The child was born at term, but was feeble until two years old. He was dull mentally and did not smile or walk until after three years old. He did not talk until eight years old. Slept thirteen hours out of the twenty-four and his general health seemed excellent. He never had any illness except measles.

His symptoms all improved markedly as the result of the ingestion of thyroid three times a day in one-grain doses. Dr. Fussell thought these cases might properly be classed with those spoken of by Horsley as being born with but few, if any, signs of the disease, and who gradually become cretins.

DR. H. B. CARPENTER presented a patient with cretinism, a female, three years old. She did well until one year old, then seemed to stop growing; she could only say a few words, "mama" and "papa," and when brought to him at the Dispensary of the Children's Hospital three months ago presented a typical picture, the enlarged tongue, stunted growth, etc. She has been very slow in teething and there was no sign of the thyroid gland. There was marked edema of hands and feet; they were cold and mottled. She is twenty-six inches in height.

Half a drachm of phosphate of soda three times a day and quarter of a grain of thyroid extract in glycerine have been given her. Five days after beginning this treatment the mother brought the child back and said the child was brighter and better. The edema after a few weeks' treatment subsided. She now walks well, will ask for things she wants, the temperature is normal, the urine is normal and she has now sixteen teeth; the tongue is also quite normal.

DISCUSSION.

DR. TULL.—I have been very much interested indeed in seeing these cases, because a year ago I attended a woman, now dead, who was a middle-aged cretin, her arms and legs presenting an infantile appearance. She has two nephews, both of whom I have attended, having also been present at their birth, and both of these children look as if they might have been the twins of those presented by Dr. Fussell. The mother of my patients presents a marked goitre.

DR. D. J. M. MILLER.—I should like to know what preparation of extract Dr. Fussell employed.

DR. FUSSELL.—Parke, Davis & Co.'s thyroid extract.

DR. MILLER.—The reason I asked Dr. Fussell what preparation he used was because I think some of the preparations must be unreliable. I had a patient, an old gentleman, about sixty years of age, with congenital ichthyosis, to whom I directed the Resident to give thyroid extract two grains three times a day. He took the thyroid ten days without any symptoms whatever. Shortly after this it was discovered that he was quite prostrated, his tongue coated and his pulse running between 120 and 130. It was then found that he had been taking twenty grains at a dose of a certain firm's preparation, in other words, sixty grains a day. It was immediately stopped and he recovered. Either there was an idiosyncrasy on his part or the preparation of the drug was unreliable, and I believe Dr. Starr, of New York, who reported some cases a few years ago, emphasizes the importance of employing a reliable preparation.

DR. STENGEL.—Did your patient lose weight?

DR. MILLER.—He grew thin and his ichthyosis improved very much. There was complete loss of appetite and pulse running from 120 to 130 and prostration was very extreme. It was two or three weeks before he recovered entirely.

DR. A. E. ROUSSEL.—I would like to ask the experience of the members of this Society with thyroid extract in cases after thirty years of age. I remember reading a review in the *Semaine Medicale* quite recently where it is claimed the results obtained after twenty or twenty-five years of age are hardly to be noticed, and in this connection I think I remember the case of a cretin at Blockley when I was a resident there fourteen or fifteen years ago, and I have been wondering whether anyone here had tried thyroid extract on the same.

DR. PRENDERGAST.—There is a case in West Philadelphia, an account of which was published in the Sunday *Inquirer* possibly a year or so ago, with a picture also of the sufferer. This patient now is about twenty-five years old. I came across the case accidentally while attending another member of the household. The patient has never talked, never walked, and is an imbecile in every way. It simply makes known its wants by a sort of a grunting sound. Both cornea are ulcerated, it has an enormous head, the tongue protrudes, the mouth is open all the time and the case is one of extreme interest, although I have never followed it up, as I was not called to see that case.

It would be a case worth looking after and experimenting with thyroid extract to see if anything could be done at that period of life.

Another point about which I should like to ask Dr. Fussell is the effect of thyroid extract in exophthalmic goitre. I have seen it recommended in such cases. In those cases that do not denote a congenital absence or atrophy of the thyroid gland I think it would do mischief.

DR. W. S. STEWART.—I have had, in my experience of thirty years, four cases, and I have noticed that the parents, if not blood relations, have, at least, very similar characteristics and physical conditions. One cretin, whose parents were blood relations, while an imbecile in other ways, was able to mimic well the gait of a bow-legged man.

DR. RHEIN.—I have seen, within the last two years, cases of imbecility which, though not true cretins, presented a certain aspect of cretinism. The face and hands were puffy in appearance, the hair coarse, the scalp dry and scaly. In such cases, I think the thyroid extract should be employed, in the hope of assisting mental development. In one case in which I gave the extract, the results were encouraging.

DR. GITHENS.—I had under my care some years ago a very interesting case, a child with four healthy brothers and sisters, at a time when the family were under intense mental excitement because of failure. The child was perfectly healthy when born, and remained so for about six months, with the exception that it was rather sleepy, so that I thought the nurse drugged it, but I could never prove it.

The child ceased to grow at six months old and remained that size for thirteen years. The myxedematous condition was horrible to look upon. The skin of the limbs was typical. At this time I saw some of the articles in English journals upon thyroid extract, so I consulted with the family and used dessicated gland obtained from Parke, Davis & Co. I began with five grains twice a day, found it entirely too large, and reduced it so that one or two grains were given every two or three days.

The effect was marvellous. The myxedematous condition disappeared. Previously the tongue could not get into the mouth, but it now went within; the lips contracted, the face changed completely, and the child, which up to this time had not been able to stand, walked, spoke single words, began to use words to express ideas, and to stand, and to begin to grow so that in six months it gained six inches. Unfortunately, a convulsion, the cause of which could not be determined, brought the experiment and the life of the child to a sudden termination.

DR. ESHNER.—There is now under observation at the Infirmary for Nervous Diseases, in the service of Dr. Wharton Sinkler, a cretin, upwards of thirty-two years of age, who has been under treatment for more than a year with thyroid extract, in doses of one, two, or three grains, given once or oftener in the day. In this case there has been the usual disappearance of subcutaneous fat or mucoid tissue, loss of weight, softening and growth of hair, return of perspiration, increase in growth, and improvement in intelligence. November 11, 1895, the weight was seventy-four pounds; the height, 112.6 cm. On July 15, 1896, the weight was sixty-seven pounds; the height, 115.8 cm.

I should say that in the cases of maturer years, while the improvement is not so marked as in cases in younger children, it is still very considerable. In either case the improvement ceases with the withdrawal of the medicament, so that it is necessary to continue the administration in minimal dosage to maintain the effect. The patient of whom I have spoken is about as large as a child of twelve years, but her intelligence is far below that of a child of this age.

DR. ROSENTHAL.—Have you made any examination of the mothers of these children? Have you made any examination of the reflexes of these children, as well as the motion? I recollect in Elwyn they have some cretins who, when they rise from the floor, on which they spend most of their time, get up in a very peculiar manner, which resembles progressive muscular atrophy.

DR. FUSSELL.—I made no examination of mothers except cursory. Both children had peculiar motion on getting up in coming into the Dispensary. The mothers are not goiterous.

In regard to the little boy about twelve years of age (the last patient shown), as an instance of his improvement mentally, the other day he was shown a picture of a twelve or thirteen-years'-old child, and said that it was a picture of himself when he was a boy.

DR. GEORGE WOODWARD read a paper on

The Chemistry of Colostrum Milk.

DR. A. V. MEIGS.—It is difficult to criticize a paper such as that to which we have listened. It has taken a great many weeks to elaborate, and is therefore almost beyond

criticism for the moment. One can only speak of the subject in a general way and express admiration for the work done by the author. The difference in the actual chemical composition between colostrum and ordinary milk is probably not very great. The presence of the so-called colostrum corpuscles has for a long time been known, and it is also known that there are physiologic differences between colostrum and ordinary milk.

The whole subject of milk analysis is one of comparatively recent origin. Becquerel and Rodier in their treatise on "Pathological Chemistry," published in France in 1854, state that milk analysis dates from the early part of this century, and that previously only its physical characteristics had been studied. Milk may for all ordinary purposes be said to consist of five ingredients, water, fat, casein (which includes all albuminoids), lactose or sugar and the salts.

It is easy to ascertain the amounts of the water, of the fat and of the salts, and chemists do not disagree in regard to the quantities of these three ingredients, but when it is attempted to decide the amounts of casein and sugar the difficulty in milk analysis is reached and the differences of results obtained have been so great as entirely to satisfy my mind that most of the difference is due to faults in the methods. For instance, one chemist reports six or seven per cent. of casein and one per cent. of sugar, or *vice versa*. Such wide divergences are certainly due to faulty methods and not to actual differences of the milk. There is every reason to believe that milk is of reasonably stable composition.

There is one criticism I may make: As I understood Dr. Woodward, he said that he estimated the proteids directly and determined the amount of sugar by difference. In original work in milk analysis I think this is an unreliable method of arriving at a result. It is only if each constituent part is separately determined that the final results can be checked and certainty of conclusion attained.

My own method of analysis I believe to be accurate, and I do not see why it is not a good one, although it is so very simple in its principles. It takes about two or three weeks to carry the process through with a single specimen of milk, and therefore it occupies a large portion of time. I spent two years working at the subject and in the course of that time did not make a very great number of analyses.

It has always seemed to me that the reduction of sugar by copper, or the estimation of the sugar with the polariscope, when we wish to determine the casein and sugar in milk, are unreliable methods. The method of Vernois and Becquerel, which has been more widely quoted than any other analysis of human milk, was to determine the casein by adding acetic acid and rennet to the milk, which precipitated the casein. They then direct that the whole mass be thrown on the filter, and the clear filtrate was tested by the polarimeter of that day, an instrument probably very similar to the polariscope of to-day. This method is so inaccurate that it is easy to understand their overestimating the casein, because much sugar as well as casein must remain upon the filter. The estimate of the casein by difference instead of directly is most unscientific and almost certain to lead to erroneous conclusions.

I once sent to a professed sugar chemist a sample of milk residue of which I wanted an estimate of the sugar, and he answered that there was a very much less quantity than I thought it contained. Thinking he might have made an error and in order to determine whether his method was correct, I made a solution of milk sugar and asked him to tell me its strength; he gave me a wrong answer, which satisfied me that the determination of the sugar with the polariscope is an unreliable method if applied in milk analysis. The copper reduction method has been worked out much better and has been much more used in determining grape sugar than ever has been done with milk sugar, and I consider any method which determines either one of these important constituents, casein or sugar, by difference, introduces a great element of liability to error.

DR. STENGEL.—I can appreciate the difficulty to which Dr. Woodward has alluded, of making analysis of all the constituents when specimens are examined daily, and it is fortunate that he selected the lactose as the constituent to be calculated from the total solids and the substances specially determined. The quantity of lactose is so much greater than that of the proteids that even a considerable error in the determination of the latter would not materially affect the result so far as the lactose is concerned; while, in the other case, had he determined the lactose and estimated the proteid by subtraction, a relatively small error would have rendered the result comparatively wortbless, so far as the proteids are concerned.

It seems to me that Dr. Woodward's work is commendable, because he has taken the trouble to estimate by Kjeldahl's method the quantity of albuminous matter from day to day. There are undoubtedly some errors in this estimation, as he admits. The nitrogen of the milk is certainly not all proteid-nitrogen, though the amount of non-albuminous nitrogen is very small. In the second place, the factor for deducing the albumin from nitrogen cannot be said to be absolutely accurate, since albuminous bodies differ in their composition. This error likewise must be very small.

It would seem to be desirable, from the scientific point of view, to know the exact quantity of each of the different proteid bodies found in the milk, but such an analysis would require a great amonnt of material and such an expenditure of time that it may be doubted whether daily analysis could be carried out by a single person. For clinical purposes it is, perhaps, at the present time unnecessary to consider the different albumins separately.

PERISCOPE.

FORMULÆ.

FOR UTERINE LEUCORRHEA:

The following is a useful astringent and antiseptic injection for uterine leucorrhea:

℞
Tannic acid . . . . . ℥ij
Pure alcohol,
Beechwood creasote . . . . . āā ℥j
Distilled water . . . . . ℥viij

M. A tablespoonful of this solution to be mixed with a quart of tepid water, and used as an injection. Three or four injections daily.—*The Practitioner.*

FOR PRURITUS OF THE VULVA:

In cases that are not parasitic, says the *Indépendence Médicale*, M. Mussy advises the following applications:

℞
Finely powdered starch . . . . 300 gm.
Bismuth subnitrate.,
Potassium bromide . . . . . 15 "
Calomel . . . . . 8 "
Powdered belladonna . . . . . 3 "

M. To be applied twice a day. It is said to give almost instant relief.

When the itching affects the inner surface of the mucous membrane, it is preferable to prescribe the following:

℞
Infusion of mallow flowers . . . 1 qt.
Cherry-laurel water . . . . . 750 gm.
Borax . . . . . 150 gm.

M. To be used as an injection twice a day. After each injection, the parts are to be smeared with an ointment.—*Medical Record.*

FOR IRRITABILITY OF THE BLADDER AFTER DELIVERY:

℞
Salol,
Tincture of hyoscyamus . . . . āā ℥ij
Infusion of buchu, enough to make 6 fluid ozs.

M. S.: A tablespoonful three times a day.
—*New York Medical Journal.*

FOR UTERINE HEMORRHAGE:

Following abortion and attended with subinvolution:

℞
Fluid extract of ergot (Squibb's) . . . ℥ij
Fluid extract of viburnum prunifolium . ℥ij
Tincture of cinnamon . Enough to make ℥ij

M. Dose: Teaspoonful in hot water from two to six times a day.—EGBERT.

FOR THE INSOMNIA OF NEURASTHENIA:

℞
Chloral formamidate,
Tincture of ginger . . . . . āā 1 part
Mint water . . . . . 15 parts

M. S.: A tablespoonful to be taken at the time of going to bed.—*Presse Médicale.*

FOR ATONIC ULCERS:

℞
Iodol . . . . . 2 parts
Vaseline,
Lanoline . . . . . āā 10 "

M. To be spread thin on aseptic lint and applied.—*N. Y. Medical Journal.*

FOR TOOTH EXTRACTION:

The following is recommended as a means of lessening the pain of tooth extraction:

℞
Cocaini hydrochlor.,
Morphinæ sulphat.,
Chloral hydrat.,
Acid. carbolic . . . . . āā gr. x]
Aq. rosæ . . . . . f℥x

M. Sig. Inject with a hypodermatic syringe into the gums.—*The Practitioner.*

FOR USE IN TYPHOID FEVER:

℞
Carbonate creasote . . . . . ℥xix
Thymol . . . . . ℥vj
Menthol . . . . . ℥iij
Eucalyptol . . . . . ℥viss
Alcohol, commercial, . . . q. s. ad ℥viij

M. ft. solutio.
Sig.: This is stock solution.

To make emulsion from the above, in order to the better administer it, use

℞
Solution carbonate creasote compound, ℥v
Powdered gum arabic . . . . . ℥iss
Pure water . . . . . ℥iv

M. Sig.: One teaspoonful every three hours in wineglass of water, to be followed by drink of water.—DR. T. W. SIMMONS in the *Virginia Medical Semi-Monthly.*

℞
Ammonii carbonatis . . . . . ℥ij
Acidi salicylici . . . . . ℥iiss
Elix. pepsini lactat.,
Aquæ cinnamomi . . . . . āā ℥ij

M. Sig.: Teaspoonful in a little water every three hours.—DR. HENRY R. SLACK in *Atlanta Medical and Surgical Journal.*

FOR CANCER OF THE UTERUS:

℞
Sodii chlorat. . . . . ℥v
Syr. aurant. flor. . . . . ℥j
Aq. destill. . . . . ℥iij

M. Sig.: From 2 to 8 teaspoonfuls to be taken daily.

Locally,

℞
Sodii chlorat.,
Bismuth subnitrat . . . . . āā ℥iiss
Iodoform . . . . . ℥j

M. Sig.: Apply a small quantity on a tampon to the cervix.—E. DUVRAC in *Brit. Med. Jour.*

NEWS AND MISCELLANY.

The regular meeting of the Surgical Section of the Buffalo Academy of Medicine was held February 2. Program: Results of 350 Operative Cases of Inguinal Hernia in the Male, William B. Coley, B.A., M.D., Surgeon to New York Cancer Hospital, Surgeon to Hospital for Ruptured and Crippled; The Use of the Galvano-Cautery Within the Nose and Throat, with Demonstration, Horace Clark, M.D.

An American Physician Dead in Chili. —Dr. James H. Trumbull, formerly of New Haven, Connecticut, died recently at Iquipue, Chili. He was graduated from Yale College with the class of 1848, and from the College of Physicians and Surgeons, New York, in 1852. He had resided at Talcahuano and Concepcion, Chili, for more than forty years.

A tramp recently assaulted Dr. Thomas Dunn English, one of the oldest living graduates of the medical department of the University of Pennsylvania, and the famous author of "Ben Bolt," at his home in Newark, N. J., but escaped without serious injury. The assailant was taken into custody after a lively chase, and was held for trial.

A convict in Sing Sing prison has recently developed a case of malignant anthrax, the result of scratching a pimple on his neck with his finger nails. He had been handling curled hair, such as is used in upholstery work, and it is supposed that the anthrax spores had collected under the nails. He has had violent hemorrhages from the nose and mouth, and his left side is completely paralyzed, but Dr. R. T. Irvine, the prison physician, thinks his chances of recovery are good. It is said that only about a dozen cases of this disease in man have heretofore been reported as occurring in this State.—*Med. News.*

The Fort Wayne Medical Journal-Magazine, representing a complete consolidation of all the interests of the *Journal of the Medical Sciences*, established sixteen years ago, and the Fort Wayne *Medical Magazine*, established four years ago, has begun publication. The editorial staff includes all the editors of the two periodicals from which the new periodical arises, the editor of the Fort Wayne *Medical Magazine* having been elected editor-in-chief.

The chairs of Anatomy, Clinical Surgery, and Genito-Urinary Surgery are vacant at the Medico-Chirurgical College. Only the chair of Anatomy is salaried. All applications should be addressed to Isaac Ott, M.D., Dean.

Nephritis prior or subsequent to conception, due to some intercurrent disease that would have determined the lesion anyway, is always the cause of albuminuria. So long as it does not rise above one grain per 1000, the character of the urine being otherwise normal, the immediate prognosis is that the albuminuria or renal lesion itself will not cause any accident, at least during the first six months.

If albumin reaches or rises above two per 1000, particularly when accompanied by edema or anasarca, scanty urine of a *feuille-mort* or sanguineous color, with tendency to dilatation of the heart and to uremic symptoms, the immediate prognosis is extremely bad, both for child and mother, premature labor and miscarriage occurring in three out of four cases.

The prognosis of albuminuria during pregnancy is complex. It is liable to vary under certain conditions proper to gestation, such as the undetermined condition termed eclampsia and two others; the pressure on the *ureters* by the gravid uterus and fatty degeneration of the tubercular epithelium.

Eclampsia is, in all likelihood, due to some intoxication, which causes albuminuria. The latter exists only so long as the convulsions last or it persists after the convulsions. The prognosis of the co-eclamptic and post-eclamptic albuminuria is dependent upon the degree of eclamptic intoxication. The cause of eclampsia is not to be found in any renal lesion. The latter and the albuminuria which expresses it are *the result* and *not the cause* of the eclamptic intoxication. Practically, however, albuminuria is so frequently associated with eclampsia that whatever may be the exact relation between the two, the prognosis of albuminuria during pregnancy, generally speaking, is considered rather grave. Pressure on the ureters and fatty degeneration do not cause albuminuria, but they are facts that necessarily bear upon the prognosis of any pre-gravidic or co-gravidic nephritis, impeding the excretion and secretion of urine. The extent of pressure or of degeneration is a capital factor.

Summing up albuminuria during pregnancy as in other conditions, a fit is the alarm-signal, and should be watched closely, the circumstances either giving rise or adding something to a nephritis, the prognosis of which is subject to vary accordingly.

Albuminuria during labor passes away with labor, which caused it by stasis of the abdominal circulation. Post-partum and puerperal albuminuria are not to be included in gravidic albuminurias. They are infectious, febrile albuminurias, and their prognosis has been already considered.—*New Orleans Medical and Surgical Journal.*

A case of congenital pulmonary stenosis and patency of the ductus arteriosus Botalli is reported by a physician in *The Medical Press.* The patient was a girl, aged twenty-

two, troubled with intense cyanosis and remarkable drumstick-shaped fingers. She complained of palpitation, shortness of breath, and headaches. The conjunctivæ of the prominent eyes were injected. Over the heart from the pulmonal to the jugular region a strong fremissement was to be felt, and loud systolic murmurs were heard over the whole heart. There was no venous pulse, the left ventricle was strongly hypertrophied. He arrived at the diagnosis given, on the following grounds: The age of the patient, and her fairly well-nourished condition; the subjective complaints were not excessive; the pulse in the right radial was quite strong, whilst in bad cases of stenosis only a small quantity of blood reached the left ventricle and aorta. The ductus Botalli remained patent, as it usually did, when pulmonary stenosis was present, as the closure of it followed full development of the lungs, and in the case shown that was the more probable, as a part of the venous blood in the right heart overflowed into the aorta. Another reason for believing this was that the blood-pressure was stronger in the femoral than in the radial artery. He believed that such a difference in the blood-pressures in favor of that of the lower extremities was due to the blood flowing from the ductus Botalli into the aorta, passing into it below the point where the large upper vessels were given off, so that these could not profit by the plus of blood.

Concerning displaced semi-lunar cartilages, Dr. Graham, discussing the matter in the *Journal of the Medical Sciences*, says:

1. That neither in their natural or unnatural positions can semi-lunar cartilages often be distinguished from the surrounding tissues.

2. That the position of the leg affords the best means of inferring whether one or the other semi-lunar cartilages may have been dislocated when it cannot be felt; the leg being usually flexed and the foot turned out when the internal meniscus is dislocated, the leg flexed and the foot turned in when it is external.

3. To attempt to replace a dislocated semi-lunar cartilage it is wise to flex the leg, then extend suddenly, rotating the leg inward if it be the internal cartilage, outward if it be the external, while exerting pressure over the offending region.

4. That there is a natural tendency in some cases of dislocated semi-lunar cartilages to slip back into place when the leg is not artificially restrained.

5. That if the knee be immovably fixed by plaster or splints before the cartilage has gotten back into its natural situation, the joint is locked and restrained from gentle instinctive movements that might favor its return.

6. That cases of displaced cartilage are attended by voluntary and involuntary restraint of motion on account of pain and mechanical impediment; and in some cases by synovitis and the formation of adhesions. Forcible passive motion might then have the double purpose of breaking the adhesions and rectifying the displacement.

7. That even after a meniscus has been restored to its natural situation, it is not so securely and comfortably held by plaster and splints as by a pad of a few folds of bandage and figure-of-eight bandage applied over this, which affords support and comfort and a safe limit of motion.

8. That it is possible by carefully applied massage, resistive movements, home exercises, and electricity, so to strengthen the muscles on the front of the thigh, the fascia, ligaments, and attachments of the knee-joint that they will safely hold a previously dislocated semi-lunar cartilage without artificial support.

9. These remarks do not apply to cases requiring surgical operation, though the above-mentioned combination of treatment might be safely tried in some cases before cutting into a knee-joint, but more especially after operation for restoring motion and strength to the knee.

Attention is directed to the unusual or exceptional baleful effects of the bromids in continuous or unnecessarily large doses, by Dr. J. A. Hodges, in *The Maryland Medical Journal*. He writes that if the bromides are to be continued for any indefinite period it is difficult to determine what is a safe dose. It is clinically substantiated by Voison (*Archives Générales*) that sixty grains, repeated for from three to six times, at intervals, with some persons will occasion slight nausea and diarrhea, while Bartholow (*Materia Medica and Therapeutics*) has ascertained that 100 grains for one dose will lower the temperature in a healthy adult from one-fifth to one-half a degree, the respiration from two to five, and the pulse from ten to twenty beats per minute.

Some effects of the bromids produce symptoms which are attributed to the disease and not to the remedy. The following are mentioned among these commonly unsuspected effects:

1. Increased irritability of temperament.
2. A depression of spirits with a tendency to moderate melancholia.
3. Impairment of memory and also of contractility of muscles.
4. Irritant to the gastric mucous membrane.
5. Bromids act as an aphrodisiac.
6. They disturb the circulation.
7. Extraordinary susceptibility to toxic effects in cases of cerebral lesions, etc.
8. Tendency to give rise to homicidal and suicidal impulses.
9. Bromids weaken the nervous system.